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AN EXPLORATORY SEARCH FOR CHARACTERISTIC PATTERNS OF HIGH PERFORMANCE RATED AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES IN A COUNSELING PRACTICUM.

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RESPONSE CHANGES BETWEEN HIGH-PERFORMANCE-RATED AND LOW-PERFORMANCE-RATED COUNSELOR CANDIDATES AS A RESULT OF AN INTRODUCTORY EXPERIENCE IN A SUPERVISED PRACTICUM AT THE UNIVERSITY OF MICHIGAN WERE STUDIED TO DETERMINE IF PERSONAL CHARACTERISTICS DIFFERENTIATED THE TWO GROUPS. THE THEORETICAL FRAMEWORK, VARIABLE DEFINITIONS, AND A REVIEW OF EXISTING LITERATURE ARE PROVIDED. AT THE BEGINNING OF THE SEMESTER, 162 COUNSELOR CANDIDATES WERE ADMINISTERED THE COUNSELOR QUESTIONNAIRE, THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY, AND THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY (CSAI). AT THE END OF THE SEMESTER, THE SAME GROUP TOOK THE CSAI AND THE NATIONAL DEFENSE EDUCATION ACT COMPREHENSIVE EXAMINATION. IN ADDITION, THE PRACTICUM SUPERVISORS SUBMITTED RATINGS OF EACH COUNSELOR CANDIDATE DURING, AND AT THE END OF, EACH SEMESTER. AN EXPLORATORY SEARCH AND A REGRESSION ANALYSIS OF THE DATA WERE MADE. PATTERNS WHICH INDICATED CHANGE TENDED TO BE CHARACTERISTIC OF INDIVIDUALS WITHIN THE GROUPS AND NOT COMMON TO GROUPS AS A WHOLE. THE SIGNIFICANT VARIABLES INDICATED THAT HIGH-RATED INDIVIDUALS WERE MORE CONCERNED WITH CLIENT INTERNAL NEEDS, READY TO MEET ISSUES HEAD ON, MORE CONCERNED WITH THEIR ROLE, AND MORE CONCERNED WITH CONFIDENTIALITY OF INFORMATION. LOW-RATED INDIVIDUALS WERE LESS CONCERNED ABOUT CONFIDENTIALITY, LESS READY TO MEET ISSUES HEAD ON, AND MORE CONCERNED ABOUT EXTERNAL PROBLEMS OF THE CLIENT. THIS DOCTORAL DISSERTATION WAS SUBMITTED TO THE UNIVERSITY OF MICHIGAN, 1966. (PS)

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CHARACTERISTICS OF HIGH AND LOW PRACTICUM RATED COUNSELOR-CANDIDATES

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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by

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of the requirements for the degree of
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CHAPTER I

INTRODUCTION

In a society which demands excellence of its specialists, pressures are prevalent to increase the amount of education of those preparing for that specialty. Often this occurs without general agreement or understanding within the profession as to the value and outcomes of existing preparation programs.

In the education of school counselors, this phenomenon is reflected in the recent statement by the American Personnel and Guidance Association on the Standards for Counselor Education in the Preparation of Secondary School Counselors (3) which sets as the minimum level two years of full-time graduate education. This increase comes at a time when authorities (15, 34, 64) fail to agree on the appropriate areas of preparation and the effects of already existing programs of counselor education are not fully understood.

There are many concerns associated with a more complete understanding of the preparation and behavior of counselor-candidates. One of these is the need for more knowledge about the effects of a supervised practicum upon counselor-candidates and a second is the development of more adequate means for accessing the multitude of characteristics which affect counselor- candidate behavior.

That the supervised practicum is an important area of counselor preparation is evident from the widespread support and testimony it has received. (3,4,6,10) Yet, while few would doubt the importance of the supervised practicum in a counselor education program, and emphasis upon it has been increasing, (3), there is little understanding of the nature of the experience for counselor-candidates. In order more fully to understand current practicum experiences and to plan for future ones, answers to some of the following questions are needed. Are there changes in behavior as a result of the supervised practicum? In particular, are there changes in response to actual counseling situations as a result of the supervised practicum? Are there differences in the types of behavior changes between those individuals who have experienced a more successful practicum and those who have experienced a less successful practicum? Are there differences in personal characteristics between those who have experienced a successful practicum and those who have not? It was to a more complete understanding of these questions that this study was directed.

Because of the lack of research into the supervised practicum, this investigator decided to explore empirically the experience in an effort to generate hypotheses which would increase insights into the practicum and point towards areas for further research. Empirical research of an exploratory nature often is necessary in order to give new insights into phenomena. Most survey research is of this kind. C. H. Patterson (51), in discussing the need and contribution of exploratory research, said:

> "Survey research is exploratory. Its purposes are to identify variables which are apparently significant or pertinent and to provide a source for theory and hypotheses. Theory and hypotheses do not spring full blown from the head of the scientist. They must be based upon observation which is essentially what survey research is. We cannot short circuit the process by omitting this stage. It is not only important; it is necessary. We should not be ashamed that we are engaged in this type of research. It is just as much science as the testing of hypotheses." (51, p. 271)

Purpose of the Study

One purpose of this study was to investigate changes in response patterns to practical situations as a result of a supervised practicum and to investigate patterns of personal characteristics which differentiate between groups of counselor-candidates.

A second purpose was to explore the phenomena of practicum through the use of a new computer technique to generate hypotheses by searching for patterns of characteristics which differentiate between groups.

Assumptions

The two general assumptions which guided the investigation are:

1. High performance rated and low performance rated counselor-candidates exhibit different patterns of change with respect to various counseling situational problems as a result of the practicum.
2. High performance rated and low performance rated counselor-candidates exhibit different patterns of personal characteristics.

Theoretical Framework

The practicum is one of a series of experiences through which a counselor-candidate moves in the process of becoming a counselor. Developmental theory (16) suggests that a person's growth is a series of progressions or phases through which the individual moves towards full maturity. Practicum might well be looked at as one of these stages or tasks of development.

A student enters the practicum at some level in his development towards becoming a counselor. Through a variety of experiences which are provided, he makes some progress towards his eventual goal. This progress could be labeled change or alteration of behavior from his pre-practicum behavior.

Since practicum offers, as it does, an opportunity for a counselor-candidate to respond to various practical situations, changes in behavior towards these situations represents one aspect of a student's development in the practicum.

While changes which represent development are undoubtedly unique for each counselor-candidate, it would seem that those individuals who had experienced a more successful practicum would tend to exhibit different patterns of changes, i.e., reached or completed different phases of development, than those individuals who had experienced a less successful practicum. This differential in growth and development as a result of a practice effect would appear to be one of the essential features of this experience. To understand these differential patterns of change would add greatly to our knowledge regarding practicum.

Trait theory provides a rationale for explanation of many of the other phenomena which are observed in a supervised practicum. Trait theory suggests that on the basis of measurable differences among traits (or characteristics) or among trait patterns, it is possible to predict performance or behavior. (2)

One of the phenomena noticed regarding individuals in a practicum is the wide range of personal characteristics which they exhibit. Each counselor-candidate possesses unique traits which affect his performance in a counseling practicum. This wide range of personal characteristics requires that supervisors approach each counselor-candidate in a unique and different manner. And yet, as different as the personal traits of these people appear to be, they often talk about trends of characteristics which those students who have experienced a successful practicum seem to possess which differ from those who have had a less successful practicum.

Some of these traits which might differentiate levels of success in a practicum are those which may be classified as personal characteristics. These personal characteristics include personality (affective) factors, demographic factors, aptitude, and achievement.

If measurable differences in response changes and personal characteristics exist among counselor-candidates in the counseling practicum, identification of these traits which differentiate among counselor-candidates would have important implications for counselor preparation.

There is still another facet of trait theory to consider. While the theory suggests that there are measurable differences among individuals, it does not indicate that these differences exist singly or in isolation. Indeed, as Jones (36, p. 127) put it, "It seems probable that we shall not find a single pattern that indicates a successful counselor, but different patterns equally good and equally effective in different situations." More recently, in a discussion of trait theory related to practicum supervision, Roeber (54, p. 4) has suggested that:

> ". . .we must give up the idea that there are one or two dimensions or a single pattern of many dimensions that will predict success in a practicum or on the job and that we might more profitably strive to identify differential patterns, all of which under different circumstances may lead to successful performance in a practicum and on the job."

Pattern analysis theory, which states that there are combinations of characteristics or items which when taken together will discriminate among criterion groups (20), provides a basis for attempting to locate patterns of traits which differentiate between groups of counselor-candidates.

However, while pattern analysis is not new, techniques to facilitate massive amounts of work involved in the analysis were not available. Now, with the speed and power of an electronic computer, it is possible to investigate more fully patterns of traits. This study utilized a new computer technique to search for patterns of characteristics. (33)

There are undoubtedly many personal characteristics which are present in individuals. Generally two broad categories have been identified in relation to counselors. These areas are known as cognitive and conative characteristics. Early research (12, 38) into counselor competence or success emphasized cognitive traits. Even later, Gysbers (22) when he studied counselor characteristics related to multiple criteria, correlated cognitive and conative characteristics separately with each criterion.

In contrast to this procedure, trait theory would suggest that there may be important combinations of cognitive and conative traits which account for meaningful differences. Roeber (54, p. 5) referred to this point when he said:

> "We might better turn our efforts toward discovering patterns which combine cognitive and conative traits, patterns which portend movement toward successive stages of development."

This study attempted to combine cognitive and conative characteristics into differential patterns between criterion groups.

These theoretical considerations provide a framework for understanding the practicum and assisted in an interpretation of the results of the exploratory search.

Definitions

For purposes of clarification, the following definitions of terms used within this study are offered.

Supervised Practicum

By supervised practicum is meant the course offered in a program of counselor education which provides actual counseling experience with real clients, usually under supervised conditions. The experience normally provides the opportunity to work with test selection, administration, and interpretation; use of occupational information; conferences with clients, parents, and other counselor-candidates in group sessions; and close supervision by an experienced counselor educator. The term counseling practicum will also be used throughout the text to refer to practicum.

Patterns

By patterns is meant combinations of characteristics (variables or items) which, when considered simultaneously, tend to describe individuals or groups. A pattern is not an entity itself, but a combination of factors and becomes meaningful only as it reflects the factors. Patterns are determined by the computer search program which builds them from proportional differences between groups.

Change

By change is meant alteration of one's position or attitude relative to some idea, concept, or situation. Change is not defined as complete and full difference of opinion, but as an alteration of one's position relative to some idea at a particular point of development. This change is certainly progressive and therefore not absolute, but tends to reflect a person's direction of development. In this study, change was measured by relative position on responses to the *Counselor Situational Analysis Inventory*. In order for a difference of response to be classified as changed, it had to vary at least two positions on a five position scale from pre- to post-testing.

Response to counseling situations

By response to counseling situations is meant a person's reaction to alternatives of counselor action relative to practical counseling situations. Response to counseling situations was measured by the *Counselor Situational Analysis Inventory*.

High performance rated counselor-candidates

By high performance rated counselor-candidates is meant those individuals who are judged by their supervisors to have experienced a successful practicum. The high performance rated counselor-candidates consisted of approximately the upper thirty percent of the counselor-candidates in the practicum on a performance criterion.

Low performance rated counselor-candidates

By low performance rated counselor-candidates is meant those individuals who were judged by their supervisors to have experienced a less successful practicum. The low performance rated counselor-candidates encompassed the lower thirty percent of the counselor-candidates in the practicum on a performance criterion.

The rationale for supervisory rated groups was based upon the nature of the practicum. Supervisors tend to witness certain and varied degrees of growth and differentiation of performance in various situations throughout the practicum and form perceptions about counselor-candidates who appear to be functioning better than others. Even though reliable evidence is not available concerning the relationship of this supervisory rating on future counseling performance, it seems important to attempt to describe the differentially rated individuals because of the integral part of practicum that supervisory judgments play. This information should provide for better understanding of the supervised practicum.

Personal Characteristics

By personal characteristics is meant those traits which tend to distinguish and characterize a person. For this study, personal characteristics were limited to those of personality, demographic factors, aptitude, and knowledge in counseling and guidance.

Personality characteristics were those affective traits which were measured by the *Minnesota Multiphasic Personality Inventory*. Demographic factors identified for this study were secured from the *Counselor Questionnaire* and included: age; sex; marital status; parents' educational level; undergraduate major and degree; graduate major; level of school experience; teaching field; amount of exposure to psychology and sociology; whether or not the individual had completed the basic guidance courses of counseling process, environmental information, and measurement of aptitudes; years of teaching experience;

years of other work experience; and years of previous counseling experience. Aptitudes were defined as a person's level of intellectual potential and were measured by the *Ohio State University Psychological Examination, Form 26*. Knowledge was the level of information about the field of guidance and counseling one possessed, and was measured by the *NDEA Comprehensive Examination, University of Michigan Form*.

Limitations of the Study

This study was limited to those individuals who completed the supervised practicum for the first time. While often growth in counseling skills is not evidenced until the end of an initial practicum experience, knowledge of the effects of the initial practicum experience upon the enrollee is essential for a better understanding of not only the initial practicum, but also upon which to build experiences and learnings for a second practicum.

Another limitation of the study was the consideration of only the performance criterion for judging the relative success of the supervised practicum for any individual counselor-candidate. Certainly significant experiences and growth in a practicum cannot be limited to increases in performance skills alone. This excludes the whole area of self awareness, self growth, and self actualization which may accompany or even precede growth in performance skills. It may well be that in order for an individual to experience significant changes in performance skills, this self awareness and self perception are necessary. This beginning of movement in awareness of self and integration of self might well encompass many of the values of the introductory practicum.

Nevertheless, one exposure to the practicum is currently sufficient to qualify one to perform as a school counselor. It is usually to an assessment of performance skills that supervisors are directed when asked to evaluate the success of an introductory practicum experience for any one individual. Therefore, while recognizing the certain contribution self growth and self awareness play in a practicum, this study focused upon the differential in performance skills.

Also, this study was limited in that it represented an accidental sample of counselor-candidates enrolled in the supervised practicum, Education J721, at the University of Michigan from the Summer of 1965 through the Summer of 1966. As Chein (13) suggests, this limits the generalizations that can be made from the data.

Summary

This investigation was an attempt to identify patterns of response changes between high performance rated and low performance rated counselor-candidates as a result of an introductory experience in a supervised practicum at the University of Michigan. It also attempted to establish patterns of personal characteristics which differentiated between these two groups.

The design of this study was to generate hypotheses about the practicum experience. This was accomplished through the use of a new computer technique to exhaustively search qualitative data for differences between groups of counselor-candidates.

CHAPTER II

REVIEW OF THE LITERATURE

The main objectives of this study were: 1) to study the effect of the counseling practicum upon counselor-candidates and to discover patterns of personal characteristics which differentiated counselor-candidates, and 2) to generate hypotheses relative to the practicum experience through the use of a computer search for patterns of counselor-candidate characteristics. There exists a broad range of research and writing which relates to these objectives and provides a frame of reference for the present work. This chapter reviews this body of pertinent literature and attempts to draw relationships between the various works as they relate to the present study.

For organizational purposes, this review is divided into four categories: 1) outcomes of counselor education programs, 2) practicum, 3) personal characteristics of counselors, and 4) development of pattern analysis. The literature is vast and no attempt has been made to be comprehensive. The task has been to be selective and thus the review represents what this author believes to be the relevant literature.

Outcomes of Counselor Education Programs

The question asked in this section is essentially what changes in development are a result of a counselor education program? With increasing interest in counselor education and expanding educational requirements for counselors, an understanding of the effects that current preparation programs have on the students is paramount. However, there appears to be a paucity of research in this area which caused Stripling and Lister (57,p. 171) to comment, "Few of the counselor education programs reviewed included any systematic evaluation of behavior change in counselor candidates."

Still, some significant research and thinking has been produced relative to this topic. Joslin (38), studying two outcomes of the NDEA Counseling and Guidance Institute at the University of Michigan in 1959-60, concerned himself with knowledge development as measured by an NDEA comprehensive achievement examination in guidance and counseling and in counseling competence as measured by fourteen dimensions of counseling competency as rated by judges. He found that the scores on the achievement test differed significantly from pre- to post-test warranting a conclusion that the preparation program had increased the knowledge of the counselor-candidates. There was likewise an increase in thirteen of the fourteen scales of counseling competence from early Institute counseling interviews to late Institute counseling interviews. However, while relationships between knowledge and counseling competence appeared to increase, they failed to reach the expected level of significance. On the basis of Joslin's work, it would appear that counselor education programs do increase an individual's grasp of concepts in the area of counseling and guidance and tend to increase his counseling competence.

In an attempt to reinforce the findings of Joslin, Beloit (9) examined the extent of changes occuring in both knowledge and attitude during the course of the training year; and also studied the relationship between this level of knowledge and attitudes towards concepts relating to counseling. His criterion of counseling competence was judged potential as public school counselors. His results showed that:

1) The level of didactic knowledge can be significantly raised by an Institute.

2) Neither the level of didactic information nor attitudinal characteristics alone adequately characterize the more successful trainees.

3) Drastic attitudinal changes as measured by the Webb-Harris version of the Semantic Differential are not likely to take place.

> 4) No predictors could be located which were accurate enough of post training ranking to warrant use in selection.

Beloit's findings, along with those of Joslin's tend to support the hypothesis that a counselor education program increases knowledge of counseling and guidance.

In another study which attempted to ascertain changes of attitude as a result of an intensive six week training program, Demos and Zuwaylif (16) used Porter's test as a pre- and post- instrument of attitudinal change. Besides isolating significant changes in counselor attitude, the authors hoped to discover how much change occurred in students who were rated above average, average, and below average and if counselors moved from being evaluative at the outset to being more understanding at the end of the preparation period. From their results on forty NDEA Institute members from a Summer 1960 Institute at the University of Southern California, the investigators discovered that:

> "The enrollees became significantly less evaluative, supportive, and probing and more understanding and interpretive by the end of the six week period.
>
> "The above average counselors made a significantly greater decline in the use of evaluative responses and chose more understanding responses than did the average and below average counselors.

> "Chances are that the best counselors exhibit attitudes prior to or early in the training program that are more understanding and less evaluative." (16, p. 126)

A glance at these findings suggest that counselor education programs change some attitudes on the part of the counselor-candidates and that a criterion of above average, average, and below average provided for a meaningful grouping of the candidates to measure attitude change.

Also using _Porter's 10 Question Test of Counselor's Attitudes_, Munger and Johnson (49) investigated changes in attitudes of counselor-candidates. Their sample included twenty-eight secondary school teachers participating in an eight week summer session during the 1959 NDEA Institute at the University of North Dakota. Porter's test was administered three times during the eight week session: once on the first day of the session; a second time on the last day of the sixth week which completed the instructional phase of the program; and at the end of the eighth week, the practicum phase. Basically, the authors concluded that "principal changes took place within the formal course work of the first phase of training and that changes of attitudes continued and were strengthened in the second phase of training." (49, p. 752)

Jones (37) was interested in the persistence of attitude changes and so he measured attitudes before an NDEA Institute, on the last day of the institute, and six months later. Essentially, he found no changes in attitudes towards administrative framework of the job; change in the direction of accepting and understanding the client as a person instead of informing or advising him; some change from immediate concerns of the client to more total concerns; movement towards greater listening and permissiveness on the part of the counselors; and increased confidence in the use of professional techniques. Of particular interest, Jones found that all changes which were significant at the end of the preparation program continued to persist at the end of a six months follow-up period. While the persistence was not as strong as the original change, the trends pointed towards definite conceptualization and internalization of the changes on the part of the counselor-candidates.

Using the Minnesota Multiphasic Personality Inventory (MMPI), Edwards Personal Preference Schedule (EPPS), Guilford Zimmerman Temperament Survey (GZTS), Educational Interest Inventory, and an Opinionnaire for Counselors, Clark (14) studied the changes in response patterns of institute enrollees on a performance criterion. Because the number of significant changes did not exceed chance, he concluded that there were no changes due to the preparation program. It would appear that one of Clark's problems was to expect change in basic personal characteristics such as his instruments tended to measure. It would seem that such behaviors as ways of handling given situations and attitudes towards people would tend to change as a result of a preparation program and not basic personal characteristics. Since most of the significant changes Clark did discover were on the Opinionnaire for Counselors, his findings tend to support this hypothesis.

A summary of this section would suggest that research on the outcomes of counselor education programs has been limited mostly to change in knowledge or attitudes, and more work is needed to ascertain the effects of the program on the counselor-candidates.

Practicum

In its standards report (3), the American Personnel and Guidance Association has defined three types of practicum experiences, the laboratory, supervised practicum, and field experience or internship. In this same report, the association called for increased supervised practicum requirements for counselor-candidates. Testimonies to the efficacy of the practicum abound (3, 4, 6, 10, 24, 63), many of them based on the opinion of counselor educators, beginning counselors, and experienced counselors. In this deluge of unanimous support for an educational experience, which Walz, Roeber, and Gysbers (63) point out is rare indeed, there exists a dearth of research to understand the experience as it affects the counselor-candidates. However, there are several studies which tend to illuminate the situation.

Walz and Roeber (62) discovered that a group of supervisors at mid-western universities when asked to provide supervisory comments to a typescript tended to emphasize cognitive aspects of the interview. This information leads one to wonder whether these supervisors emphasize this aspect of the practicum to their counselor-candidates.

The focus of another study (28) was the effects of two types of feedback on counselor-candidates in the practicum. In this study, Holtrum hypothesized that there would be differences in anxiety and self/ideal self concepts as a result of either personal or instrumental feedback. She further suggested that these differences would have some relationship to counselor-candidate growth and learning in the practicum. While no results were significant, trends suggested support for the hypothesis that different types of feedback do seem to have some effect on anxiety and self/ideal self concepts.

Hansen (24) studied the relationship between the counselor-candidate's level of experiencing and self awareness to the supervisory relationship. Based on an assumption that a higher level of experiencing and a higher level of self awareness represent outcomes of the supervised practicum, he sought answers to the part played by the supervisory relationship to this outcome. Twenty-eight enrollees of an NDEA Institute at Ohio State University comprised the sample and were randomly assigned to one of three supervisors. Ratings of supervisor-counselor-candidate relationship as judged by both students and supervisors were compared to level of experiencing and an index of self awareness. From these data, Hansen discovered some relationships as were hypothesized. The wide variance in individual counselor-candidate's perception of the supervisory relationship led Hansen to conclude that:

> "supervisors establish different relationships with their groups of trainees, drawn from the same population, and these relationships appear to affect different trainee behaviors." (24, p. 95)

Addressing himself to this consideration of the supervisory relationship, Gysbers (23) has presented hypotheses which suggest that counselor-candidate anxiety is a result of the amount of threat they perceive in the candidate-client and supervisor-candidate relationships.

In another study, Axelson (7) investigated the relationship of empathic perception among counselor-candidates to elements of rapport within groups of practicum counselors. Axelson assumed that accurate empathic perception among counselor-candidates in preparation is a desirable educational practice and that "the elements of rapport within an instructional group or situation are important factors in the initiation and maintenance of empathic relationships." (7, Abstract, p. 1) He discovered that self projection and emotional needs are most closely related to empathic perception, that feelings of personal adequacy, conscious awareness, and scholastic aptitudes have negligible relationships with empathic perception, and that perceptual distortion and chronological age have no relationship with empathic perception.

In reporting his inability to ascertain growth or change in counselor-candidates in a four month practicum internship program on personal characteristics assessed by the MMPI and the Primary Empathic Abilities Test, Barney (8) suggested:

> "If we are to expand the amount of counselor education time devoted to supervised counseling, it would seem that this needs to be justified by demonstrating the effectiveness of an internship program. (8, p. 106)

Thus, while the limited research reviewed sheds light upon some facets of the experience, there remains little information about the effects of the practicum on counselor-candidates.

Still, practicum has obtained a great deal of attention in the literature through a discussion of the issues relative to the experience. A look at some of these viewpoints may help clarify the phenomena.

Certainly training internships and practicums are not unique to counselor education. Hansen (24) has shown that much of the current practicum experience has been drawn from related fields such as those of industry and teacher preparation. It was as early as 1936 when Robinson (53) published her initial work on supervision in social case work. In the area of counseling psychology, the American Psychological Association, has issued a statement relative to the practicum training of counseling psychologists (4) and Ekstein and Wallterstein (17) have written extensively about the nature of supervised practice in the education of psychotherapists. Also, in the general area of planned change, Lippit (39) speaks of the value of the laboratory experience as a means of enhancing growth and development. It is interesting to note that even in these areas research into the practicum experience lags far behind a discussion of issues and procedures.

Walz (61), Roeber (54), and Gysbers (21) have attempted to provide further understanding of the nature of the supervisory relationships based upon self, trait, and learning theories. In an integration paper (63), the three writers have listed the learnings inherent in a practicum as:

> "1) Cognitive learnings emphasizing information and concepts such as counseling theories and occupational information,
> 2) Skills acquired through practice such as test interpretation and some aspects of interviewing, and
> 3) Professional and self development as shown in greater concern for confidentiality and greater congruence between counseling style and life style." (63, p. 2)

Generally the practicum is seen as a learning experience which assists in the growth and development of the counselor-candidates. Truax et. al. (60, p. 242) have suggested that the candidate needs to exhibit "psychotherapeutic personality change" as a result of the preparation program. They further suggest that the supervisory relationship is a special form of psychotherapy.

While he does not agree that supervision should be therapy, Patterson (52) contends that the supervisory relationship should be therapeutic so that it enhances growth. He maintains that supervision is somewhere between teaching and counseling and has as its objective the influencing of counselor-candidate behavior.

Arbuckle (6) suggests that the supervisor must act much like a counselor, possessing such qualities as self congruence, honesty, genuineness, and unconditional positive regard. He maintains that the most important dimension in the relationship is "learning," and he suspects that the supervisor is an authority figure.

While these statements regarding the supervisory relationship in the counseling practicum tend to shed some light on the nature of the experience, they fail to explain the effects on the change and development of the counselor-candidates.

Practicum can be understood as part of the total process of counselor development resulting from a counselor education program. (Ideally, this development continues throughout the counselor's professional life.) Moving from this assumption, developmental theory suggests that there are stages of growth in the learning and maturation process of the individual. Hunt (30, p.45) sheds some light on this postulate when he states:

> "The impact of a year's intensive study and practicum involves changes in values, attitudes, and perceptions which are apparent from observation and personal report of counselor trainees. However, lack of understanding regarding the nature and ramifications of these changes has encouraged inefficiency in taking full advantage of them."

Hunt then develops a model of the types of developmental stages or phases of counselor-candidate growth which appear to be the result of an NDEA Institute.

> "I Initial Period--where the counselor is full of threat for the new situation and anxious about an unfamiliar situation.
>
> II Mechanical Period--emphasis at this point becomes focused on tools and techniques of the trade.
>
> III Discovery Period--the counselor-trainee begins to be confused as to what he is doing and what he is trying to accomplish.
>
> IV Fuller Realization of Self--a period of reflection regarding self, inadequacies are discovered which effect the establishment of the full counseling relationship.
>
> V Transcending the Former View of Self--these new enlightenments are reflected in a broader concept of role and a fuller utilization of self. The person can become honest in the counseling relationship." (30, p. 46-47)

Working separately, Thomas (58) arrived at a similar model for stages of counselor development, but his are related directly to the practicum experience.

> "I. Initial--Adjusting to the practicum setting, operational procedures, etc. Beginning the counseling experience. Concerned with preservation of self.
>
> II. Dependency--Feels that there must be a "right" way of counseling, looks to supervisors to provide model, tends to faithfully follow "experts." Counseling tends to be rather mechanical.

> III. Exploratory--A period of questioning the models, self, and the counseling process. Begins to see no "right" way. Begins to explore models, self, and the counseling process. A period of exploring the real meaning of counseling. Beginnings of an emerging self-concept as a counselor.
>
> IV. Establishment--Emergence of a counselor self-concept. A period of reality testing. Establishment of a style and counseling rationale congruent with self.
>
> V. Maintenance--(A non-practicum stage) Continues the process of becoming a counselor, or entrenchment of established self on the job. No significant growth occurs."

In summary, research into the supervised practicum is incomplete and issues and discussion consider mostly the supervisory relationships. It appears that a fuller understanding of the counseling practicum must also consider the impact of the experience on counselor-candidates. Hunt (30, p. 45) expressed it:

> "Identification of the change process could be helpful for several reasons. From the point of view of the trainee, personal change is often confusing and anxiety arousing. Knowledge that one's specific adjustment problem represents that which is also typical of colleagues could alleviate some of the anxiety. Aware that a chronology of change exists in which he can be identified, a counselor involved in specific concerns might broaden his perspective to a more generalized conception of what he is facing. A fuller grasp of what is happening might facilitate his movement into a more advanced aspect of the process. Those responsible for supervision of training could have a clearer idea of the type of change in a trainee at a given point of the training program. Prognostications could then be drawn as to what personal considerations might

> be entailed in the period of transition in which a trainee was struggling. Some idea of the problems facing a person would be helpful in thinking through how he might best be helped. On an evaluative basis, some training techniques might bring about more rapid or more comprehensive change. Thus, a program could be refined so as to include approaches which are conducive to desired changes. A final evaluation of a program might include some consideration of the numbers of people involved in certain types of changes."

Personal Characteristics of Counselor-Candidates

In the April 1963, Review of Educational Research, Stripling and Lister (57, p. 171) wrote that, "Writers agreed upon the importance as well as the difficulty of assessing counselor personality characteristics." And yet, from the early writings of Parsons (50) to current research, considerable attention has been given to the assessment of personal characteristics of counselor-candidates. Consideration will be given to the literature on this topic which more directly relates to the present study. Criteria for inclusion include those related to counselor-candidates, those using a differential criterion of ratings, or those using similar instruments as the present study.

Generally, scores of high rated counselor-candidates tend to be somewhat depressed on some scales of the MMPI when compared to low rated counselor-candidates. Snyder (56), in his early research on clinical psychology students, obtained ratings of "good" and "poor" prospective clinical psychologists on senior-level students and located significant differences on academic achievement and intellectual capacity between the groups. While the t scores on the different scales of the MMPI failed to achieve significance, they did suggest a trend which led Snyder to generalize that "good" prospective clinical psychologists tend to have low t scores. He described the "good" prospective clinical psychologists as:

> "more aggressive, independent, unconventional, intellectual, and social and less religious, neurotic, and prone to feelings of inferiority. On the other hand, the poor clinical students tended to be more conventional, to be more religious, and to have feelings of inadequacy and neurotic concerns. However, in many of their personality traits these two groups are similar and the differences are primarily ones of degree." (56, p. 51)

Using a criterion of whether or not a counselor-candidate was perceived as one to whom his fellow candidates would go for counseling, Arbuckle (5) noted similar results. Those who were chosen had lower t scores on Hypochondrasis, Depression, Paranoia, Hysteria, Schizophrenia, Social-Introversion, and Psychasthenia scales while those who were rejected scored higher on the Hypochondrasis, Paranoia, Hysteria, Schizophrenia, Psychopathic Deviate, and Hypomania scales.

A global rating of promised counseling proficiency was used by Abeles (1) to establish high and low groups and then he studied differences between the groups on the MMPI and other instruments. His sample included one hundred and thirty graduate students who had completed the practicum course. Abeles groups did not seem to be as differentiated by high and low t scores on the MMPI as did Snyder's and Arbuckle's. In an attempt to account for this discrepancy in results, Abeles advanced the argument that his population differed from the others. Abeles also suggested that male counselors tended to be somewhat at odds with the expectations society holds for them as men.

Similar findings relative to elevated MF scores of males were reported by Embree (18). His research was comprehensive in that he studied enrollees in fifteen NDEA Counseling and Guidance Institutes across the country in 1962. The results reported here are taken from his notes of a talk to the University of Michigan Institute in 1963. He noted that the K scale tended to be elevated which appears to be in keeping with other research. Embree's study also indicated some elevation of enrollees on the Hysteria, Psychopathic Deviate, Hypomania, Paranoia, Psychasthenia, and Schizophrenia scales of the MMPI. He suggested that since these include four out of the five clinical scales to which K is added, and the group tended to be elevated on K, the correction factor might have been the cause of the elevated scales. Noting that these are some of the scales Snyder and Arbuckle reported as differentiating between high rated and low rated counselor-candidates, one might wonder whether the K scale had been an influencing factor in these differences.

Embree was unsuccessful in discovering any discriminating scales on the MMPI when he considered the top eight and bottom eight students of each Institute. He attributed this to lack of agreement among Institute Directors on the criterion.

In studying the relationship between multiple criteria of counseling effectiveness and conative and cognitive variables, Gysbers (22) used three instruments which were used in this study, the MMPI, the Ohio State University Psychological Examination (OSPE), and the NDEA Comprehensive Examination (NDEA Comp.). He found some relationships between the OSPE and NDEA Comp and counselor effectiveness. This suggested some relationship between cognition and counselor effectiveness. The results on the MMPI and other instruments used to access conative variables offered no support for a relationship between conation and counselor effectiveness. Gysbers proposed that situational tests of the type used by the Army during World War II might be useful.

The results of a study by Moore (45) tend to give support to Gysbers findings that cognition is related to counseling effectiveness. Using a regression tecnhique, Moore attempted to predict potential success as school counselors on enrollees in fifteen NDEA Institutes using as independent variables many of the usual instruments including the MMPI, OSPE, and NDEA Comp. Only the NDEA Comp and undergraduate grade point average were related to the criterion. The variables in the equation were able to account for only .34 of the variance. Conative variables such as the MMPI did not enter the equation. Moore, like Embree, felt that a major problem of her study lay in the disagreement among the raters regarding the criterion of potential success as school counselors.

A study in progress by C. D. Thomas also uses the regression technique. Thomas' study is to relate personal characteristics including those from the MMPI and OSPE to multiple ratings of counselor effectiveness. His study is of particular interest because he used the Counselor Situational Analysis Inventory (CSAI) as an instrument to obtain a measure of counseling effectiveness. Basically what he did was to develop a scale of responses rated by judges which represented effective counselor responses and scored the inventory for each counselor-candidate based on the scale. By dividing the high scores from the low scores on the CSAI, he obtained one of his criteria of counselor effectiveness.

Another example of the use of the CSAI as a research tool is supplied by Johnston. (35) He used the CSAI, the MMPI, and the NDEA Comp to discover relationships between counselor characteristics and on-the-job performance ratings. Using the ratings of principals and practicum supervisor for fifty practicing counselors, he found no relationship between scores on the NDEA Comp and principals ratings but did find significant relationships between NDEA Comp scores and practicum supervisor ratings. He found only one scale on the MMPI, Social-Introversion, which differentiated between high, average, and low on-the-job rated counselors.

Johnston used the CSAI somewhat differently than did Thomas. He obtained judges ratings of responses which indicated that too much responsibility and inappropriate responsibility was assumed by the counselor. The tests were scored on both scales for each subject. The inappropriate responsibility scale showed some usefulness and Johnston concluded that the CSAI "shows promise."

Like Moore and Thomas, Johnson (31) used a regression technique to predict global effectiveness as a counselor from non-intellectual (conative) variables including the MMPI, EPPS, GZTS, *California Psychological Inventory* (CPI), and the *Strong Vocational Interest Blank* (SVIB). From the large number of variables, she was able to isolate five which predicted the criterion: Architect on the SVIB and Well Being on the CPI for men, and the Schizophrenia scale on the MMPI, Friendliness on the GZTS, and Dentist on the SVIB for women. Because of the limited number of significant variables, she concluded that chance might have been the explanation of the results.

In order to develop scales which would differentiate "most promising" candidates in guidance and counseling from a norm group in the College of Education at the University of Illinois, Foley (19) used the MMPI and the GZTS. While the approach was novel, an item analysis of the responses between the counselor-candidates and the norm group on both instruments failed to classify future students into more and less successful groups upon cross-validation. The failure to obtain discriminating scales led Foley to question the use of these instruments for pre-selection and classification of counselor-candidates.

Considering personal characteristics of counselor-candidates on a developmental basis, Mordock and Patterson (46) studied students enrolled in four graduate courses in guidance and counseling at the University of Illinois in the summer of 1961. The four courses were assigned levels:

Level I	(Principles of Guidance)
Level II	(Basic Principles of Counseling)
Level III	(Principles and Techniques of Group Guidance)
Level IV	(Supervised Practice in Guidance)

Other than the fact that the students at the end of the practicum tended to be more tolerant, sociable, flexible, spontaneous, and self-confident than beginning students, no other differences among levels were found.

A final study to be considered is one by Callis and Prediger (12) who attempted to predict achievement in guidance graduate study based on the OSPE and undergraduate grade point average. Using three summer NDEA Institutes in 1959, 1960, and 1961, they discovered that Part 3 of the OSPE (Reading Comprehension) was the most powerful predictor followed by the total score on the test. This lends support to other studies which suggested the importance of cognitive processes as measured by the OSPE in success in counselor-education programs.

Many of the studies reviewed on counselor characteristics have attempted to develop a description of the high and low rated counselor-candidates based on the variables isolated. Even though often the instruments and criteria differed, the general descriptions of the groups of counselor-candidates tend to be similar. I have edited and combined some of the descriptions to arrive at the following generalizations.

High rated counselor-candidates tended to have greater interest in working with people and placed greater emphasis on social values, were less interested in tasks involving work with figures or routine tasks; were more frank in their self assessment of weaknesses, less domineering and quarrelsome, more tolerant of others, more intelligent, sensitive, sentimental, individualistic, and high strung, (1); more socially introverted (35); more aggressive, independent, unconventional, intellectual and social, less religious, less neurotic, and less prone to feelings of inferiority, (56); more tolerant, permissive, flexible, adaptive, sociable, outgoing, spontaneous, self confident and poised. (46)

On the other hand, low rated counselor-candidates tended to show more interest in science, place somewhat greater value on the accumulation of wealth, were happy go lucky, domineering, quarrelsome, less intelligent, somewhat more concerned with putting themselves in good social light, had a greater need to dominate, (1); were more extroverted (35); were more conventional, more religious, had feelings of inadequacy and had more neurotic concerns. (56)

These descriptions seem to be too inclusive and obviously refer to generalizations about groups and not necessarily to certain individuals within the group.

The literature reviewed in this section seems to warrant the following conclusions.

1. Cognitive variables appear to influence success in counselor education.
2. There is a lack of agreement on criteria of counseling success and on appropriate instruments to measure personal characteristics.
3. The CSAI appears to be a research instrument worthy of further study in assessing aspects of a counselor education program.
4. A meaningful way to combine cognitive and conative variables in attempting to describe groups needs to be sought.

Development of Pattern Analysis

It appears that Brigham (11) was the first person to recognize the predictive advantages to be gained from the study of items within a single test as opposed to total scores. He summarized six years of work as follows:

> "These studies might be summarized by the general conclusion that a test item, regarded as a specific problem to which a certain number of answers may be made, when given to

> two or more populations sampled for study in the same manner, will show approximately the same distribution of criterion scores for each possible answer in the several groups sampled." (11, p. 69)

In 1936, Zubin (65) considered the determination of response patterns of items in personality inventories. He contended that a knowledge of the patterns of test responses to each item may be more important than knowledge of a total score.

Even though each of two dichotomous items may have zero validity related to a dichotomous criterion, Meehl (44) discovered that when these two items are considered simultaneously and scored configurally they may have highly increased discriminating power related to the criterion. This phenomenon has become known as "Meehl's Paradox."

Considering Meehl's technique of configural scoring, Horst (29) has shown how it is a special case of a non-linear combination of item scores, compared to the linear combination ($T = b_o + b_1x_1 + b_2x_2 \ldots$) which is the case where the total score of the test is considered.

In a study of responses of 1,474 subjects to 20 items on the MMPI, Lubin and Osborn (40) described a technique of pattern analysis which selects the single best item for predicting the criterion and then builds pairs, triples, etc. based on this single best predictor. Also, they extended the polynomial approach of Horst's which, according to McQuitty (42, p. 12), "show(ed) that a polynomial function yields a maximal relationship with a continuous criterion for standardized subjects."

A review of the status of the pattern analysis approach to predictive measurement was presented by Gaier and Lee (20) in 1953. They pointed to Zubin as having a great deal of influence in the understanding of the possible implications of test items.

> "Zubin pointed out that total scores may conceal as much as they reveal, since psychological equivalence of the constituent items can seldom be established nor their additive characteristic proved. A total score may thus carry considerable less significance than a direct and detailed analysis of the test response *per se*." (20, p. 140)

The authors also present a list of some of the methods used for comparing test patterns, which includes:

> "1. Zubin's similarity coefficient
> 2. Du Mas' "slope" method which describes similarity of profiles in terms of slopes of corresponding segments.
> 3. Cattell's r coefficient of pattern similarity
> 4. The D coefficient of Cronbach and Gleser
> 5. The checklist method
> 6. Ratios among profile variables
> 7. Correlation coefficients among the scores
> 8. Pattern tabulation
> 9. Multiple regression equations
> 10. Discriminant function." (20, p. 143)

A leading proponent of pattern analysis techniques, McQuitty (43) developed an agreement analysis technique in an attempt to discriminate between 144 mental hospital Negro patients and 144 normal Negro subjects in the community. The agreement analysis "computes an agreement score for each subject paired with every other subject. A matrix of agreement scores is obtained." (43, p. 599) This matrix is then subjected to factor analysis techniques in order to locate patterns.

In another study (42), McQuitty discussed three types of pattern analysis. One, cumulative pattern analysis, was the technique used by Lubin and Osborn (40) which was described earlier. Secondly, he described reductive methods which start with all responses to the test items for any one individual and reduces, "it to one or more patterns of less than all the items." (42, p. 5) And last, he discussed dual-pattern method which first classifies subjects into categories based on criteria, and then determines the patterns of responses which is characteristic of each criterion group. (This is essentially the method used in this study.) McQuitty then developed an investigation to illustrate this dual-pattern method. He studied the differences in patterns among six groups of 240 aircraft and engine mechanics in the Air Force on five predictors. In predicting his criterion, McQuitty found the dual-pattern method yielded about as dependable predictors as a linear model would.

And still later, McQuitty (41) described a method of differential pattern selection whereby he stated that:

> "A pattern of responses is the answers given by any person to either (a) all of the items of any test or (b) any subtest of them. A pattern of responses is peculiar to a criterion category if it is given by some members of one category and none of the other, such as some patients and no normals or visa-versa." (41, p. 85-86)

Another technique for analyzing qualitative data appears to have many of the properties of other pattern analytic techniques. Morgan and Sondquist (47, 48) have described a technique whereby they identify and segregate a set of sub-groups which reduce the error in predicting the dependent variable. Variables are included in the set which continue to reduce the total sum of squares by at least one percent. The authors describe the technique as a "search" to reduce the sum of squares.

One of the major limitations which has been associated with the technique of pattern analysis is the clerical task of isolating patterns or combinations of items which may discriminate. The amount of work has been so enormous that until recently study of the technique has been limited to a few variables at a few levels.

The introduction of the electronic computer provides for a solution to this problem. A number of pattern analytic techniques are now programmed for computer analysis. M. Clemens Johnson (32) has recently described a procedure by which he uses the speed and power of the computer to search for differences between groups based on qualitative data. This procedure uses the proportional occurence of any single, pair, or triad of items or variables between criterion groups to determine the degree of discrimination of the pattern. The program (33) screens many possible patterns, identifying those which are better discriminators. The basic analysis of this study used this program and a complete description of it can be found in Appendix G.

One study, that by Ruckhaber (55), used the search program to discover patterns of non-intellectual variables of low-achieving and high-achieving intellectually able fourth grade boys. Ruckhaber was able to identify about eighty patterns which differentiated between the low-achieving and high-achieving students. He concluded that "the initial results of the application of the computer pattern search program suggest that this is a promising technique for studying the achievement process." (55, p. 136)

A resume of this section on pattern analysis would suggest that the technique or theory of isolating combinations of characteristics which discriminate or predict criterion groups holds promise for possibly increasing discriminating power. There have been developed a number of techniques which attempt to isolate these discriminatory factors. One of these techniques is to search for proportional differences between groups of similar item responses and with the speed and power of the computer this procedure is possible for a large number of variables all occuring at different levels.

CHAPTER III

METHODS AND PROCEDURES

This study explored the development of counselor-candidates during the process of completing an introductory supervised practicum. The Counseling Practicum course, J721, at the School of Education, the University of Michigan, served as the source of the counseling practicum experience for the subjects of this study.

The Counseling Laboratory at the School of Education of the University of Michigan was established in 1953-54 for the purpose, according to Johnston (36, p. 55), "to improve the counseling skills of all students planning to receive graduate degrees in guidance and counseling." The practicum course provides graduate students in guidance and counseling with an opportunity to counsel with elementary students, high school students, college students, and adults under close supervision of advanced graduate students and staff members. Other experiences include observation of counseling sessions; test selection, administration, and interpretation; use of occupational and educational information; interviews with parents; interaction with fellow counselor-candidates; and opportunities to evaluate one's own counseling skills with a supervisor. From the literature and personal experience of the investigator, the counseling practicum at the University of Michigan generally tends to be comparable to counseling practicum experiences in other recognized counselor preparation institutions.

Students who were enrolled in the introductory practicum during the Summer of 1965, Fall of 1965, Winter of 1966, and Summer of 1966 comprised the sample for this study. In all, 162 students completed the practicum during the four semesters, 62 men and 100 women. The general procedure of the investigation was similar for all four semesters.

At the beginning of the practicum experience, the subjects were administered the instruments used in this study, the _Counselor Questionnaire_, _Minnesota Multiphasic Personality Inventory_, _Ohio State University Psychological_ Examination, and the _Counselor Situational Analysis Inventory_. It was explained that the testing was routine for each practicum experience and that the results would be helpful to the supervisors in working with the counselor-candidates. After the initial testing, the students completed the counseling practicum course. At the end of the semester, the counselor-candidates were administered the _Counselor Situational Analysis Inventory_ for a second time and also were given the _NDEA Comprehensive Examination_.

During the practicum experience, each counselor-candidate was assigned to a small group which was under the direction of a supervisor. The supervisor had major responsibility for the practicum experience of the counselor-candidates. Assignment of students to a group was usually the result of a mutually satisfactory meeting time. Supervisors were then assigned to the groups which would fit their personal schedule. No attempt was made to assign certain individuals to the same group or to a particular supervisor. Supervisors met weekly (or daily in the case of summer session) with their groups and discussed matters of general concern, provided supervision of counselor-candidates' interviews, and generally assisted the students in their development throughout the practicum.

At the beginning of the practicum this investigator and the professor of the practicum discussed the problem of rating and evaluation with the supervisors and explained the procedures to be used throughout the semester. At the end of each four week period (two week period in the case of summer school) supervisors completed a rating on each of their counselor-candidates. Then, at the end of the practicum, a supervisor rated all students in his group on both growth and performance criteria.

The performance criteron was defined as the level of counseling skill exhibited by the counselor-candidates at the end of the semester. Level of skill was to be judged on what reasonably could be expected of a beginning counselor upon completion of the introductory practicum. Each supervisor placed his counselor-candidates either high, average, or low on this performance criterion. The performance ratings were used to compile the high performance rated and low performance rated counselor-candidate groups.

In general, one supervisor rated each counselor-candidate in his group. Because the supervisor was the individual most familiar with the development of the students within his group, it was thought that his perception of the performance of each individual would be most accurate. However, there were three groups of counselor-candidates, which, because of scheduling, had two supervisors who worked with them throughout the semester. In these cases, each supervisor completed a rating for his group and thus it became possible to consider the reliability of the ratings in these three instances. The percent agreement of the ratings was determined and then compared to the probability of this rating occuring by chance. Chance occurence was computed by expanding the binomial:

$P(X) = (P + Q)^n$

where P = probability of success of placing candidate in same cell, 1/3

Q = probability of failure of placing candidate in same cell, 2/3

n = number of occurence

From Table 1, it can be seen that for Group 1 the two supervisors had 75 percent agreement (3 out of 4). An agreement of .75 would have had a chance occurence of .11 which does not reach the generally accepted level of significance of .05. Group 2 had 80 percent agreement (4 out of 5). Eighty percent agreement has a chance occurence of .045 which exceeds the .05 level of significance. Group 3 had 100 percent agreement (4 out of 4) which exceeds the .05 level of significance. Since two of the three pairs of raters agreed with each other significantly and the third pair approached significance, some confidence can be placed in the reliability of the individual ratings.

TABLE 1

RELIABILITY OF SUPERVISOR RATINGS FOR THREE GROUPS

	Percent of Supervisor Agreement	Probability of Chance Occurence	
Group 1	75	.111	NS
Group 2	80	.045	S
Group 3	100	.004	S

Of the total of 162 counselor-candidates who completed the counseling practicum course during the four semesters, data was not available on three. Therefore, a total of 159 subjects were included in this study. Forty-eight students were judged to be high performance rated, 63 were judged to be average, and 48 were judged to be low performance rated.

Table 2 presents an analysis of the ratings for each semester by sex. Seventeen men and 31 women were high rated, 23 men and 40 women were average rated, and 16 men and 32 women were low rated. This ratio of two women to one man in each group is similar to the ratio of 56 men to 103 women in the practicum. Since there was an almost equal number of men in the high and low groups, and an equal number of women in both groups, it was felt that sex would not be a major determinant between the groups.

Means and standard deviations for men and women in all groups on the MMPI, OSPE, and NDEA Comp are presented in Appendix C.

Because it was felt that the ratings of individuals at either extremes, high or low, would tend to be most stable, the average group of counselor-candidates was not utilized in the major analyses of the study. Data relative to all three groups are presented to add clarification to the composition of the practicum enrollees.

TABLE 2

PRACTICUM RATINGS OF MEN AND WOMEN COUNSELOR-CANDIDATES BY SEMESTER

Semester	High Rated	Average Rated	Low Rated	Total
Summer 1965				
Men	6	8	6	20
Women	11	12	10	33
Fall 1965				
Men	2	4	2	8
Women	4	2	3	9
Winter 1966				
Men	2	4	3	9
Women	7	11	4	22
Summer 1966				
Men	7	7	5	19
Women	9	15	15	39

The high performance rated counselor-candidates from the four semesters were combined and assigned ID numbers alphabetically. The low performance rated group was assigned ID numbers in the same manner. Next, through the use of a table of random numbers (27) thirty high rated and thirty low rated counselor-candidates were selected for the initial phase of the study and the remaining eighteen high and low rated individuals were retained for the cross-validation phase.

The search program was used to establish patterns of responses to the CSAI and personal characteristics which differentiated between the high performance rated and the low performance rated counselor-candidates. Once the patterns were identified, the probability of the patterns occuring by chance was tested by cross-validating the patterns on the validation group with the search program. A chi-square analysis was used to check the agreement between the two analyses. A regression analysis was used with the data in an attempt to predict ratings based upon the variables used in the study in an effort to secure more information relative to the data.

Because the computer search program represents a new technique a short description of the program is presented here. A complete description of the program appears in Appendix G.

The search program (33) selects at random combinations of characteristics and determines the extent to which each is present within two groups of individuals. Up to 75 characteristics may be searched by the program. Each characteristic must be categorized into either two or three levels; i.e., agree, disagree, or agree, undecided, disagree. Three computer runs are necessary to fully analyze the data by means of this program. During the first run, all single factor-level characteristics for the two groups are printed. The second run provides for pairs of characteristics identified by the computer and a third run produces triples of characteristics which discriminate between the two groups.

The computer randomly divides each of the two principal groups into two equal subsamples. Comparisons which are found to discriminate between the first subsample for group one and the first subsample for group two are cross-checked with the second pair of subsamples prior to being printed out. This cross-check provides the investigator with some evidence on the stability of the sample proportions.

In searching for factor-level characteristics, the frequency of occurence in the first subsample for group one is initially compared with the frequency of occurence for the first subsample for group two. When the computer finds a difference in the proportional occurence for a particular characteristic (or combination) greater than or equal to that observed for any previous combination, the second comparison is made using the cross-validation subsamples. Should the two independent comparison be in reasonably close agreement, the characteristic or combination is printed out as a better discriminator. "Agreement between the first and second comparisons is assumed when 1) the value of Pl obtained in the first comparisons does not differ from the value of Pl in the second comparisons by more than one standard error, and 2) the value for P2 in the first comparisons does not differ from the value of P2 in the second comparisons by more than one standard error. The standard error of the difference between the proportions is defined as $\sqrt{2PQ/N}$ with P = Q = .50 and N = subsample size." (33, p. 3)

The program allows for a search of 10,000 randomly selected pairs and 25,000 randomly selected triples. Because these values may be less than the possible number of combinations, all combinations may not be considered in a particular computer run. This limitation is imposed by the availability of core storage in the computer. However, it is possible to search the same data more than once, and, particularly in the case of three characteristics, find additional patterns of interest. The program also permits the user to generate his own hypotheses to be searched by the computer. Thus, some comparison may be made of the effectiveness of man and machine in generating combinations of characteristics which appear to separate two groups. The program represents an hypothesis generating and not an hypothesis testing approach.

The discriminating patterns identified by the computer require careful study by the investigator. Some patterns may represent relationships which are difficult to understand. Others may be quite logical and not unexpected. However, a few of the patterns may suggest new ways of looking at the data or new relationships for more intensive study. On the whole, the program may be viewed as descriptive and exploratory; the goal being to search many variables for patterns of characteristics between two groups.

Instrumentation

Counselor Questionnaire

The *Counselor Questionnaire* was a personal data blank which had been in use for some time in the practicum. Information was obtained on demographic variables such as age, educational and vocational background, marital status, and experience in education. A complete list of the variables obtained from the *Counselor Questionnaire* and coding information for each variable is found in Appendix D.

Ohio State University Psychological Examination

The *Ohio State University Psychological Examination* (OSPE) was used as a measure of scholastic aptitude. The test has been frequently used in research on counselor characteristics. In particular, Callis and Prediger (12) indicated that it predicted with reasonable accuracy graduate grades in counseling courses. Since the OSPE is basically a test of verbal intelligence, one would expect it to be related to academic grades in graduate school.

The examination was developed in 1920 by Herbert A. Toops at the Ohio State University for the purpose of evaluating "general intelligence usually referred to as scholastic aptitude." (59, p. 1) The reliability of the OSPE is approximately .93 and the predictive validity coefficient between Form 21 and honor point ratio of college freshmen is .68. The test consists of 150 multiple choice items which are divided into three sub-tests. Sub-test 1 is same-opposites, sub-test 2 is a test of analogies, and sub-test 3 is a test of reading comprehension. The three sub-tests combine into one total score which is generally used for the measure of scholastic aptitude. Form 26, which was designed to be used with graduate students, was used in this study.

The OSPE has been used for some time in the practicum at the University of Michigan and norms based on a sample of 209 counselor-candidates during six semesters from 1962-64 have been developed. (Means and standard deviations for the subjects in this study on the OSPE are presented in Appendix C.) Based on the norms which have been developed in the practicum, a code of 3 was assigned to the 75th and above percentiles; a code of 2 was assigned to the 26-74 percentile range; and a code of 1 was assigned to the 25th and lower percentiles. Complete information on coding of the OSPE in this study appears in Appendix E.

NDEA Comprehensive Examination

This examination was a shortened form of the *NDEA Comprehensive Examination, Form 63*. The original examination was revised by Johnston (35) through item analysis of the performance of thirty NDEA Institute enrollees during 1962-63. The mean difficulty of the revised examination was 66 percent.

The purpose of the examination was to measure cognitive achievement in the general subject matter areas of guidance and counseling. The material was to cover those inputs found in the usual graduate degree program in guidance. In order to accomplish this objective, questions in five specific areas were included.

1. History, principles, and professional information. This area covered information on people, philosophical issues, and the history and development of vocational guidance and counseling.

2. Occupational and educational information. Such topics as vocational development theories and research, common occupational literature, and breadth and scope of environmental information were included in this section.

3. Tests and measurements. Knowledge about statistics relative to testing, current issues in the field, and understanding of various types of tests was sampled in this section.

4. *Counseling theory and procedure*. In this part of the examination, emphasis was on understanding of concepts underlying the major theories of counseling and the generally accepted practices used in schools.

5. *Psychological foundations and related fields*. Topics which were included in this area were defense mechanisms, exceptional children, sociological concepts, economic development, and cultural deprivation.

The examination consists of one hundred and fifty multiple choice type items. The total raw score was obtained from the number of correct items. Because appropriate norms were not available, percentile rankings had to be developed for the NDEA Comp from the subjects in this study. The three levels were assigned to percentile ranges similar to the OSPE. Codes, percentiles, and scores for the NDEA Comp are in Appendix E. The codes were used for the search analysis and raw scores were used for the regression and other analyses.

Minnesota Multiphasic Personality Inventory

The MMPI was used in the study to obtain an assessment of personality characteristics of counselor-candidates.

Used widely in research on personal characteristics of counselor-candidates (1, 5, 18, 35, 45, 56), the MMPI has shown to be a useful tool.

The authors, Hathaway and McKinley (25), suggest that the instrument covers a broad range of the important aspects of personality. The inventory has thirteen scales:

1. Lie Scale (L)
2. Validity Scale (F)
3. Correction Scale (K)
4. Hypochondriasis Scale (Hs)
5. Depression Scale (D)
6. Hysteria Scale (Hy)
7. Psychopathic Deviate Scale (Pd)
8. Masculinity-Femininity Scale (Mf)
9. Paranoia Scale (Pa)
10. Psychasthenia Scale (Pt)
11. Schizophrenia Scale (Sc)
12. Hypomania Scale (Ma)
13. Social Introversion-Extroversion Scale (Si)

Because of the wide spread use and familiarity with the MMPI, a detailed explanation of its format will not be presented. The reader who is not acquainted with the instrument is referred to the manual (25).

Since the publisher's norms are similar for men and women on only seven of the thirteen scales, it was possible to include only L, F, K, Pd, Pa, Ma, and Si scales in the search analysis. In order to divide the groups by sex and then into initial and cross-validation groups, the N for the groups (especially for men) would have become so small that the search analysis would have been meaningless.

However, it was possible to perform the regression analysis by sex because the total sample was used. Therefore, all scales were utilized to develop a regression equation.

In order to determine levels for the seven MMPI scales utilized in the search analysis, it was necessary to determine the percentile rankings for each of the scales based on the data of the 159 subjects in the study. Codes were then assigned in the same manner as the OSPE and NDEA Comp. Complete details of the coding by scales appear in Appendix E.

The codes then were used as the levels for the search analysis. Standard T scores were used for the regression and other analyses for all scales.

Counselor Situational Analysis Inventory

The CSAI was the major instrument used in this study and its development and use deserve special comment.

The instrument was developed for research purposes by Professors Roeber and Walz at the University of Michigan. Specifically their purpose was to design an instrument which would assess behavioral indices of counselors, but one which was relatively free from institutional bias. Often students become aware of ways of dealing with situations with which they think instructors and supervisors approve. It is easy enough then to translate these ideas into test taking behavior even though it may never become operationalized in actual practice. What the authors did was to present a series of situations very much like school situations and a series of alternatives counselor might choose in the given situation. The respondents react to each alternative on a Likert type scale from "strongly agree" to "strongly disagree." Generally, the "correct" or "acceptable" response is not offered and therefore the student is forced into rejecting most of the alternatives if he is to conform to what he thinks would be the choice of the instructor and supervisors. The authors theorized that it would require a high degree of conviction about personal operation and behavior for a person to consistently respond in a negative direction. That person who is looking for the "right" answer, but who has never internalized the behavior, would tend to hunt for a correct response, assuming one must be there. In this manner, the CSAI offers 34 situations and 281 responses to the individual.

The CSAI was used as a measure of counselor development in the practicum by ascertaining the change in response to the alternatives between high performance rated and low performance rated counselor-candidates from the beginning of the practicum to the end. Thus, it was necessary to code the responses to each alternative for the change that had taken place. This was accomplished in the following manner.

The Likert type scale of SA to SD was assigned levels from one to five consecutively. The pre-practicum responses to the 281 alternatives were recorded and beside them the post-practicum responses were placed. The differences in the two numbers for each alternative then were coded in three levels to indicate movement throughout the practicum on each alternative. In order to allow for chance responses which might occur when a person initially marked SA and at the post-testing marked A, it was decided that for an alternative to be coded as indicating change it would be necessary for the individual to have moved two positions on the scale. Therefore, any individual always had to move into a different position with regard to the alternative. For example, a SA would have to move to at least U, an A to at least D, and an U to SD, etc. Change in the direction from disagree to agree was coded as a one, no change was given a two, and change from agree to disagree was coded as a three.

Because of the limitation of the present computer available to perform the search analysis, it was necessary to develop some method of analyzing the thirty-four situations and 281 responses by groups of less than 75. Since the responses refer to specific situations, it was not sufficient to take the first seventy, the second seventy, and so on. It was necessary to develop some meaningful categories of the situations. Therefore, the CSAI was given to each of five judges who were asked to determine which situations presented common concerns to the counselor. The five judges consisted of two professors of counseling and three doctoral students in counseling. None of the judges had prior knowledge of the use of the instrument in this study. From the responses of the judges, the situations were placed into six categories. Four out of the five judges had to agree on the placing of a situation into a category for it to be included. Of the situations, 23 received perfect agreement and six received 80 percent agreement. Five situations (6, 11, 13, 16, and 26) which received less than 80 percent agreement were removed from the analysis because it was felt that they might be sufficiently vague or confusing as to not be consistently understood by all subjects. The categories and situations included in each are as follows:

1. Situations dealing with counselor-client concerns (1, 2, 3, 4, 5, 7)

2. Situations dealing with counselor-teacher relationships (14, 15, 17, 19, 20)
3. Situations dealing with counselor-parent relationships (8, 9, 10, 12)
4. Situations dealing with counselor-administrator relationships (18, 25, 27, 28)
5. Situations dealing with counselor-counselor relationships (21, 22, 23, 24)
6. Situations dealing with counselor relationships with other pupil personnel workers and agencies outside the school (29, 30, 31, 32, 33, 34)

A complete listing of the situations and responses of the CSAI by category is found in Appendix A.

The reliability of the CSAI warrants some consideration. The usual definition of reliability reflects the stability of a test score from one administration to another assuming no intervening learnings. As used in this study, the CSAI was given at two separate times, but intervening learning directly related to the instrument was present, therefore reliability based upon this definition is not applicable. An immediate test-retest would not be practical because of a lack of experimental independence. Split-half reliability also does not apply because the items on the CSAI are so highly heterogeneous.

Since reliability in the usual sense would not fit the application of the CSAI in this study, the reliability of the instrument had to be assumed.

CHAPTER IV

ANALYSIS OF DATA

This chapter presents an analysis of the data collected in the study. The analysis is organized around the general assumptions which were studied, and is further divided into a section on the exploratory search and one on the regression analysis. The general assumptions were:

1. High performance rated and low performance rated counselor-candidates exhibit different patterns of change with respect to various counseling situational problems as a result of the practicum.
2. High performance rated and low performance rated counselor-candidates exhibit different patterns of personal characteristics.

The design of this investigation called for an exhaustive examination of the data relative to the phenomena of counselor-candidate development in the practicum. The analyses were not restricted to an examination of the general assumptions. In an innovation approach, the digital computer was used to exhaustively screen the data. The purpose of the approach was to generate, rather than test, theoretical concepts. The computer is used to enhance insights rather than to merely solve a preassigned problem.

Thus, two different analyses were used on the data. First, a search analysis attempted to identify patterns of change and personal characteristics which differentiated between the development of high performance and low performance rated counselor-candidates in the practicum. Next, a regression analysis was utilized to predict relative standing on a performance scale in practicum based on change and personal characteristics.

Exploratory Search

A computer search was performed on the data in an attempt to identify patterns of two or three variables which, when operating simultaneously, would tend to differentiate high performance rated and low performance rated counselor-candidates. This analysis was run on the IBM 7090 Executive System at the University of Michigan through a program written by M. Clemens Johnson (33), research associate at the Computer Center. A complete description of the program appears in Appendix G.

Assumption One

The first general assumption was that there are patterns of response changes which differentiate between high performance rated and low performance rated counselor-candidates as a result of the counseling practicum. Data collected on pre- and post-administrations of the CSAI were used to measure change. The CSAI was divided into six categories of common situations and items within each category were searched to identify patterns of response changes relative to each type of counselor concern. While the assumption was not tested by the computer search, the results provide some useful insights relative to the practicum experience. The results are presented by category. Hypotheses arising from the patterns are discussed in Chapter V.

Category One: Situations Dealing with Counselor-Client Relationships

There were six situations which dealt with counselor-client relationships and a total of 61 items. Each category with appropriate situations and items is presented in Appendix A. Table 1, Appendix F reveals that, of the single items which indicated movement from disagree to agree, six were in favor of the low rated group; one even; and one in favor of the high rated group. The low rated group showed more movement from agree to disagree on thirteen items, compared with six for the high rated group and five even.

Generally speaking, it appears that the individuals in the low rated group tended to change more in both directions than did individuals in the high rated groups. It appears then that, with situations dealing with counselor relationships with clients, low rated individuals are more affected in their behavior as a result of the practicum than are high rated individuals.

Table 3 on page 70 contains the cross-validated doubles and triples for category one. Some consideration of the format of the table is in order since further tables reporting the results of the search use the same format. Patterns which received cross-validation support in favor of the high performance rated counselor-candidates are presented first, followed by those for the low performance rated group. Information on single item-levels, doubles, and triples, by group, which were selected for further study through cross-validation appear in Appendix F.

With the search technique, it is possible to isolate variables in patterns which, while they occur together, lack logical rationale for the relationship. Therefore, it was decided that the best approach for selecting patterns to be considered for cross-validation was to isolate those which had the widest differentiation relative to other patterns and which were combinations of characteristics whose simultaneous occurence could assist in understanding the data.

It will be remembered that in the description of the search program (33), the groups to be searched were divided into subsamples one and two by the computer and

TABLE 3

CROSS-VALIDATED PATTERNS OF RESPONSE CHANGES ON SITUATIONS DEALING WITH COUNSELOR-CLIENT RELATIONSHIPS WHICH DIFFERENTIATE HIGH PERFORMANCE RATED FROM LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	29-1:24-2	4	0	1	0	5	0 NS
2.	1-3:15-2	4	0	1	1	5	1 NS
3.	22-2: 1-3	4	0	1	1	5	1 NS
4.	34-2: 5-2:14-2	20	12	11	8	31	20 NS
5.	41-2:13-2:54-2	26	18	16	12	42	30 NS
6.	2-2:37-2:61-2	17	9	12	7	29	16 NS
7.	61-2:34-2:46-2	22	14	13	10	35	24 NS
8.	49-2:19-2:10-2	19	8	16	13	35	21 NS
9.	29-2:19-3	2	10	3	4	5	14 NS
10.	54-2:13-3	1	6	1	2	2	8 NS
11.	13:3:39-2:10-2	1	6	1	1	2	7 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

that subsample two was used to cross-validate the patterns prior to their being printed out for the researcher. Therefore, the patterns from the initial investigation were already cross-validated prior to being submitted to the cross-validation phase of the study. Thus, because of the rather demanding cross-validation procedure in this study, the investigator felt justified in discussing some patterns, which, although cross-validated once, did not receive strong second cross-validation.

After the cross-validation search analysis, those patterns which appeared to be supported were submitted to a chi-square analysis to determine if there was agreement between the initial and cross-validation findings.

In the case of cells fewer than five, Fisher's exact test was used. Where more than five cases were available in all cells, the chi-square test of association with Yates' correction added was used. Yates' correction was added in this case because the objective was not to reject the null hypothesis.

Of those patterns reported, all but three were not significant on the chi-square analysis, thereby supporting the null hypothesis that there was no difference between the findings of the initial and cross-validation results. The three significant patterns form a special case and are discussed in detail.

Of a total of thirty-one patterns submitted for cross-validation in category one, eleven were judged to have received some support. From Table 3, it appears that no single pattern came close to generally discriminating between high and low performance rated counselor-candidates. Study of the data made it equally clear that these groups were heterogeneous and not homogeneous. On the whole, patterns seemed to characterize only a small proportion of a group. Some of the patterns appeared to discriminate rather sharply between the groups. Presumably these combinations would have some potential value for further research and study.

While the high performance rated group did have three double patterns which indicated some movement, the majority of the patterns which received some support are patterns of no change on a number of items. On the other hand, all patterns cross-validated for the low group indicated some change. It would appear that high rated people, as a group, are somewhat more stable in their reactions to counselor-client concerns than are the low rated group.

Pattern 1 indicates that a small proportion of the high performance rated group moved from disagree to agree to item 29 (the counselor would help the student see that smoking is only a symptom of a larger problem) and no change on item 24 (Not allowing the student to smoke in an interview). No low rated individuals had this pattern. Pattern 2 indicates change from agree to disagree on item 1 (Scheduling a student with tough courses) and no change on item 15 (Allowing a student to have a conference at his own discretion). Item 1 is also paired with no change on item 22 (Sending the student to the principal) in order to form pattern 3. Basically, it would seem that these three patterns show some development on the part of high rated individuals towards a deeper concern for the client's self discovery and less manipulation of the environment to assist the client.

The three patterns, 9, 10, and 11, in favor of the low rated group, all contain no change items with items of change from agree to disagree. Pattern 9, which has no change on item 29, shows change in the direction of disagree on item 19 (Counselor asks the administrator to contact the parents for consent for a referral). No change to item 54 (A counselor indicates feelings of failure relative to establishing a relationship with a client), and change on item 13 towards disagreement, combine for pattern 10. Item 13 relates to not scheduling further interviews with the client until details on a referral have been worked out. And pattern 11 has the same change on item 13 in relation to no change on item 39 (Search school records for clues to client's lack of motivation), and no change on item 10 (The counselor helps a client plan a career even though the counselor feels that there is little likelihood of the client succeeding in that career).

These patterns seem to show some evidence of low rated individuals changing in directions of concern for the client; but more related to external matters, such as scheduling and referrals, rather than internal concerns of the client.

Category Two: Situations Dealing with Counselor-Teacher Relationships

Information from Table 2, Appendix F, indicates that the high performance rated group tended to show fewer items of change than did the low performance rated group. Of 9 items indicating movement from disagree to agree, 7 were in favor of the low rated group. On responses involving change from agree to disagree, 15 were in favor of the low rated individuals, 4 in favor of the high rated, and 1 the same for both groups.

Cross-validated patterns of response changes for category two are presented in Table 4, page 75. The results indicate that on patterns of change responses client until details on a referral have been worked out. And pattern 11 has the same change on item 13 in relation to no change on item 39 (Search school records for clues to client's lack of motivation), and no change on item 10 (The counselor helps a client plan a career even though the counselor feels that there is little likelihood of the client succeeding in that career).

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Cross-validated patterns of response changes for category two are presented in Table 4, page 75. The results indicate that on patterns of change responses

TABLE 4

CROSS-VALIDATED PATTERNS OF RESPONSE CHANGES ON SITUATIONS DEALING WITH COUNSELOR-TEACHER RELATIONSHIPS WHICH DIFFERENTIATE HIGH PERFORMANCE RATED FROM LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	11-2:35-2	25	14	13	9	38	23 NS
2.	35-2:15-2	25	16	13	11	38	27 NS
3.	29-2:17-2	19	11	10	9	29	20 NS
4.	35-2:29-2	20	12	11	7	31	19 NS
5.	35-2: 2-2	26	15	14	10	40	25 NS
6.	2-2: 1-2	28	20	16	13	44	33 NS
7.	35-2: 9-2	23	13	13	11	36	24 NS
8.	36-2: 2-2:35-2	24	12	9	8	33	20 NS
9.	29-2:35-2:10-2	18	9	9	5	27	14 NS
10.	22-2: 9-2:35-2	19	10	11	8	30	18 NS
11.	11-2: 2-2:36-2	25	14	12	8	37	22 NS
12.	29-2: 9-2:35-2	18	8	10	7	28	15 NS
13.	29-2:21-2: 2-2	19	11	12	9	31	20 NS
14.	9-2:35-2:41-2	23	13	12	9	35	22 NS
15.	2-2:35-3	1	5	1	3	2	8 NS
16.	38-2: 9-3	0	5	0	2	0	7 NS
17.	35-3:19-2	0	4	1	2	1	6 NS

TABLE 4--Continued

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
18.	9-3:25-2	2	6	1	2	3	8 NS
19.	27-2:34-3	0	4	2	3	2	7 NS
20.	34-3: 1-2	0	4	2	3	2	7 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

to situations dealing with counselor-teacher relationships, the high performance rated group had all patterns of no change. Apparently they differ little, as a group, in the way they would handle these types of situations before and after the practicum.

The results of the exploratory pattern search also indicates that individuals in the low performance rated group had some patterns of response changes; all in the direction from agreement to disagreement.

Pattern 15 shows no change on item 2 (Suggest that the business education faculty has not recognized the need for training office clerks below the secretarial level) and movement from agree to disagree on item 35 (Telling the teacher that the counselor is not a psychiatrist and that the counselor does strictly professional counseling).

In pattern 16, movement from agree to disagree is manifest in item 9 (The counselor reassures a teacher that he always defends the teacher in his counseling). Movement on item 35 from agreement to disagreement is repeated in pattern 17 with a different no change item, 19, (Counselor tells the students to take their complaints to the teacher); and pattern 18 repeats change in the same direction on item 9 with a different no change item, response 25, (Counselor tells teacher to be quiet).

Patterns 19 and 20 introduce item 4 (The counselor sends a client to the principal's office for discipline and talks to the teacher about the problem during a free period). This item also shows movement in the direction of disagreement for the low performance rated group and is combined with two different no change items, 27 and 1.

Information from Appendix B indicates that the pre-practicum means for the change items in favor of the low rated individuals are: item 9, high rated = 3.52 and low rated = 2.91; item 34, high rated = 4.18 and low rated = 3.81; and item 35, high rated = 2.58 and low rated = 2.54. These means tend to indicate that the individuals in the low rated group, by moving in the direction of disagreement, were responding more like the high performance rated group.

The change manifested seems to indicate that some low performance rated individuals were more aware of their responsibility to define their role and work on problems of relationships with teachers rather than dismissing them or shifting the problem to other co-workers.

Category Three: Situations Dealing with Counselor-Parent Relationships

Parents are a question of much concern to teachers, administrators, and counselors. Some interviews and work with students necessarily involves parents. (There are some experts who would contend that more work should involve the parents). Four situations and 32 alternatives in the CSAI dealt with parent-counselor relationship problems.

Again, looking at the single item-levels in Appendix F, Table 3 provides some insights into the types of changes which were manifest in this category. The data shows that both the high performance rated and the low performance rated groups revealed considerable change to items in this category. Out of the 29 single item-levels, 24 showed considerable change, 5 of these 24 had change in both directions. It also is apparent that the high rated individuals shared more in the change in these situations. Out of the 10 items which indicated change toward agreement, 5 were in favor of the high group and 5 in favor of the low group. Item 18 (Counselor reassures parent that there is nothing wrong with her daughter), for example, had 5 high performance individuals moving towards agreement compared to no low performance individuals.

The low performance rated group continued to show more movement in the direction of disagreement, with 15 items to 3 for the high performance rated group and 1 even. Still, much of the movement in this direction was quite marked for the high rated group.

Item 17 at level 3 was especially interesting. Twenty out of 48 high performance rated individuals and 15 of the 48 low performance rated individuals moved in the direction of disagreement on the item. (The counselor invites a parent to his office to discuss the nature of the conferences with the client). The pre-practicum mean for the high rated group was 2.75 and the low rated group was 2.45. Thus, it appears that both groups, slightly in agreement with the item at the beginning of the practicum, moved in the direction of disagreement.

Table 5 presents cross-validated patterns which tended to differentiate high performance rated from low performance rated counselor-candidates at the end of the counseling practicum.

Patterns continue to indicate more change for the high rated group in this category than in the previous two. However, there are still four cross-validated no change triple patterns whereas there are none for the low group.

Patterns 1 and 2 are particularly interesting because they both contain item 19 (The counselor tells the parent to question the daughter about the interview with the counselor), but in pattern 1 there is change towards disagreement and no change in pattern 2.

TABLE 5

CROSS-VALIDATED PATTERNS OF RESPONSE CHANGES ON SITUATIONS DEALING WITH COUNSELOR-PARENT RELATIONSHIPS WHICH DIFFERENTIATE HIGH PERFORMANCE RATED FROM LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	5-2:19-3	4	0	1	1	5	1 NS
2.	29-1:19-2	4	0	1	0	5	0 NS
3.	2-1:32-2	6	2	1	0	7	2 NS
4.	24-2: 2-1	6	2	1	0	7	2 NS
5.	5-2: 9-2	26	18	14	11	40	29 NS
6.	16-2:14-2	21	13	14	12	35	25 NS
7.	32-2: 9-2: 5-2	24	15	12	8	36	23 NS
8.	9-2: 5-2:21-3	9	4	2	1	11	5 NS
9.	15-2:32-2: 5-2	22	14	14	7	36	21 NS
10.	29-1:19-2:10-2	4	0	1	0	5	0 NS
11.	25-2:20-2: 2-2	6	0	1	0	7	0 NS
12.	16-2:15-2:13-2	20	12	16	9	36	21 NS
13.	1-2:18-3	1	8	0	2	1	10 NS
14.	18-3: 7-2	0	6	0	2	0	8 NS
15.	26-2:18-3	0	7	0	1	0	8 NS
16.	3-2:11-3	3	7	2	4	5	11 NS
17.	11-3: 4-2	2	7	2	5	4	12 NS
18.	29-2:11-3	1	6	1	3	2	9 NS
19.	18-3: 8-2	0	5	0	2	0	7 NS

TABLE 5--Continued

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
20.	25-2: 2-2:11-3	1	6	2	3	3	9 NS
21.	11-3:13-2:17-2	0	5	1	2	1	7 NS
22.	18-3: 1-2:25-2	0	7	0	2	0	9 NS
23.	7-2:11-3: 4-2	1	7	1	4	2	11 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

Item 29 (Counselor tells client that his parents want him to go to college and that he should use his ability) shows change towards agreement in pattern 2.

Patterns 3 and 4 include change from disagree to agree with item 2 (The counselor welcomes a parent interview with the purpose of convincing the parent that elementary school contributes little to career development). Pre-practicum means of 3.25 for the high rated group and 3.00 for the low rated group indicates that a few of the high performance rated individuals are moving towards agreeing with this item. Information from Appendix F, Table 3 reveals that 10 low rated and 7 high rated individuals moved in the opposite direction on this item. Change here seems to be characteristic of individuals rather than common for the group. Item 2 combined with no change on item 32 (Counselor discusses career development with parent), in pattern 3 suggests the possibility that the individuals in the high rated group might have been reacting to the opportunity to discuss career development problems with the parent.

Pattern 8 includes no change to items 9 and 5 while change towards disagreement on item 21 (The counselor tells the parent about the contents of the last interview with the daughter). Triple pattern 10 repeats pattern 2 but with the addition of no change on item 10.

Generalizing from these change items for high performance rated individuals, it appears that they tended to be somewhat more concerned for the confidentiality of information about the client and more interested in discussing issues and problems with the parents.

All of the patterns which favor the low performance rated group contain one change item with one or two no change items. The two items which indicate movement for some of the low rated individuals in these eleven patterns are items 18 and 11. Both reveal movement from agreement to disagreement. Item 18 indicates a counselor reassuring a parent that there is nothing wrong with a child and item 11 would have the counselor suggest that the parents see the principal about any complaints. Pre-practicum means for both groups on these items are: item 18, high rated = 2.16 and low rated = 1.79; and item 11, high rated = 3.20 and low rated = 2.79. This reveals that the changes for the low rated individuals tended to be in the direction of the high rated group.

A generalization from these change items would suggest that the low rated individuals are somewhat more ready to take responsibility for their own actions related to parents.

Category Four: Situations Dealing with Counselor-Administrator Relationships

Situations in this category dealt with counselor relationships with administrators, specifically the principal of the building in which the counselor operated. There were four situations and thirty alternatives.

Basically, there appeared to be somewhat less change in this category than in previous ones. It will be noted that the totals of item-levels indicating change for both groups in Table 4, Appendix F are lower than for earlier categories. Interestingly enough, the high performance rated group made somewhat more change on this category in proportion to the low performance rated group than on other categories. Still, however, the low rated individuals exhibited more change over all.

There were 13 items which tended to show movement from disagree to agree, 7 in favor of the high rated group, 4 in favor of the low rated group, and 2 even. There were 14 items which tended to reveal movement in the other direction, 2 in favor of the high rated group, 11 in favor of the low rated group, and 1 even.

Of 34 response changes checked, only 9 were supported in cross-validation. (Table 6, page 86) As in earlier categories, all triples cross-validated in favor of the high rated group indicated no change on all items. Three double patterns in favor of the high performance rated

TABLE 6

CROSS-VALIDATED PATTERNS OF RESPONSE CHANGES ON SITUATIONS DEALING WITH COUNSELOR-ADMINISTRATOR RELATIONSHIPS WHICH DIFFERENTIATE HIGH PERFORMANCE RATED FROM LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	21-1: 9-2	4	0	0	0	4	0 NS
2.	7-3:30-2	3	1	2	0	5	1 NS
3.	11-2: 2-1	4	2	4	2	8	4 NS
4.	26-2: 9-2:11-2	22	13	17	14	39	27 NS
5.	8-2:10-2:24-2	22	13	14	9	36	22 NS
6.	17-2:14-3: 8-2	2	5	1	2	3	7 NS
7.	1-1:29-2:25-2	0	4	1	3	1	7 NS
8.	1-2:30-3:23-2	1	4	0	2	1	6 NS
9.	1-2:30-3: 7-2	1	4	0	2	1	6 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

group, showed some movement but in each case in connection with no movement.

Item levels 21-1 (Counselor tells the principal that he is busy the next time the principal wants a special favor), 7-3 (Counselor accepts appointment by principal to a teacher evaluation committee and volunteers for similar assignments), and 2-1 (Protest appointment to the committee and seek a new position), which indicate change by some high performance rated individuals tend to suggest that they are somewhat more ready to protest the actions of the principal. Pre-practicum means on item 21 of 4.14 and item 2 of 3.75 indicate that the individuals reversed the rather strong disagreement position held at the beginning of the practicum.

No double patterns were cross-validated for the low performance rated group. The four triples which were supported contained one change item with two no change items. Three change items were involved.

Item 14 (The counselor will try to get some work out on schedule for the principal, but will not kill himself to finish it) showed movement from agree to disagree. Movement towards agreement was manifest on item 1 (The counselor explains his role on a committee of teachers who are to evaluate other teachers). And item 30 (The counselor uses opportunity to substitute for the principal as experience for an administrative position some day) showed movement towards disagreement.

Changes on these three items for some of the low rated individuals seems to indicate that they were concerned about the principal placing them in an "administrative" position in the eyes of the teachers, but they do not appear quite as ready to confront the principal directly as did some of the high rated individuals.

Category Five: Situations Dealing with Counselor-Counselor Relationships

One aspect of the practicum is the opportunity for counselor-candidates to interact with one another regarding issues and techniques. Axelson (7) suggested that the relationships of counselor-candidates in small groups in the practicum was an important dimension of the experience. Four situations and 29 alternatives on the CSAI dealt with the relationships and problems of counselors.

From Table 5, Appendix F, there seems to be few differences in the amount of change between the groups in this category; the differences that exist appear to be ones of direction. The high performance rated group of individuals had two more items (6 to 4) change in the direction of agreement with six responses even. The low performance rated group had more responses (6 to 3) in the opposite direction with one even. A glance down totals column shows that, for the most part, the differences were minimal.

Those patterns of change responses on situations dealing with counselor-counselor relationships which received cross-validation support appear in Table 7, page 90. Out of a total of 31 patterns submitted to the cross-validation samples, 7 received support, 3 in favor of the high performance rated counselor-candidates and 4 in favor of the low performance rated counselor- candidates. As with patterns in other categories, all contained one change item with no change items.

The two triple patterns (2 and 3) in favor of the high rated individuals, both indicate no change to the three items. Pattern 1 had change to item 9 (The counselor shows the client that another counselor is technically wrong in his test interpretation) in the direction of agreement. A pre-practicum mean of 4.18, which is at the disagree position, indicates that some high performance rated individuals were in agreement with the item at the completion of the practicum. This would seem to suggest that they were more ready to question the work of a colleague when the interest of the client was at stake.

The four patterns in favor of the low rated group show movement in both directions. Item 5 (The counselor raises an issue about another counselor at a counselors' meeting), and item 25 (Questioning another counselor's unethical behavior at a counselors' meeting) had movement

TABLE 7

CROSS-VALIDATED PATTERNS OF RESPONSE CHANGES ON SITUATIONS DEALING WITH COUNSELOR-COUNSELOR RELATIONSHIPS WHICH DIFFERENTIATE HIGH PERFORMANCE RATED FROM LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	9-1:25-2	6	2	2	1	8	3 NS
2.	8-2[illegible]5-2:18-2	20	10	13	8	33	18 NS
3.	27-2: 5-2:18-2	20	11	13	9	33	20 NS
4.	5-3:17-2	0	4	1	2	1	6 NS
5.	16-2:11-1	2	4	1	4	3	8 NS
6.	10-1: 2-2	1	3	1	2	2	5 NS
7.	16-2:25-3	0	2	0	1	0	3 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

towards disagreement. These two items suggest that some individuals in the low rated group were less willing to openly confront other counselors with ethical issues. Showing movement towards agreement, item 10 indicates that the counselor would discuss a fellow counselor's lack of professional behavior with him individually. These three items indicated that the low performance rated individuals, while wanting to discuss ethical issues with fellow counselors, were not so ready to do it openly.

In pattern 5, item 11 (Counselor lets the student decide which test interpretation is correct) showed some movement towards agreement for the low rated individuals. This item, in combination with the above three, suggests that a few of the low performance rated individuals were somewhat more concerned about relationships with fellow counselors, but less ready to confront them openly and less ready to take a positive stand.

Category Six: Situations Dealing with Counselor Relationships With Other Pupil Personnel Workers and Agencies Outside the School

This category included six situations and 46 alternatives from the CSAI. While the low rated group showed somewhat more movement in both directions, the differences were quite small. From Table 6, Appendix F, it can be seen that of the 12 responses moving towards agreement, 7 were in favor of the low rated group and 5 for the high rated group. Eighteen responses showed movement towards disagreement, 11 in favor of the low group and 7 for the high group.

Turning to the patterns of response changes that were supported in the cross-validation, 11 of the 59 received some support. Table 8, page 93 presents the patterns. Two triples in favor of the high performance rated group indicated no change, while one triple and two doubles had one change item with no change items.

Pattern 1 contained item 8 (The counselor asks the principal for assistance in getting some action out of a welfare agency), which showed movement towards agreement for a few of the high rated group. Item 44 (The counselor does not let the nurse run over him in this situation or she will do it repeatedly) in pattern 2 also shows more agreement in favor of some high rated individuals as does item 39 (The counselor advises the nurse that he also is a professional worker and has the right to contact the parents about their children) in pattern 3. Pre-practicum means of 2.39, 3.89, and 2.62 respectively indicate that the high rated individuals moved towards agreement with these items. It would appear from these patterns that the high rated individuals who change tended to become more active in their contact with other workers and agencies if the welfare of the client was involved.

TABLE 8

CROSS-VALIDATED PATTERNS OF RESPONSE CHANGES ON SITUATIONS DEALING WITH COUNSELOR RELATIONSHIPS WITH OTHER PUPIL PERSONNEL WORKERS AND AGENCIES OUTSIDE THE SCHOOL WHICH DIFFERENTIATE BETWEEN HIGH PERFORMANCE RATED AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	28-2: 8-1	3	1	2	1	5	2 NS
2.	23-2:44-1	6	1	0	0	6	1 NS
3.	24-2:35-2:39-1	4	2	3	0	7	2 NS
4.	3-2:42-2:25-2	22	14	16	8	38	22 NS
5.	13-2:31-2:43-2	20	12	13	9	33	21 NS
6.	38-2:12-1	0	7	1	1	1	8 NS
7.	6-2:12-1	0	7	1	1	1	8 NS
8.	25-3:16-2:44-2	1	4	2	4	3	8 NS
9.	12-1:23-2:46-2	0	5	1	2	1	7 NS
10.	38-2:41-2:35-2	12	20	9	13	21	33 NS
11.	41-2:35-2:34-2	11	21	10	13	21	34 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Perfomrance

This is the first category in which the low rated group had triple patterns (10 and 11) which showed no change cross-validated. Also, they had four patterns which indicated some change. However, these patterns contained only two different change items.

Patterns 6, 7, and 9 contain change towards agreement on item 12 (The counselor asks a client to send an employer a vita to which the counselor attaches the I.Q. and other information from the records). A pre-practicum mean of 3.87 which is almost at the disagree position would indicate that some of the low rated individuals are in agreement with this item at the completion of the practicum.

Pattern 8 shows movement towards disagreement on item 25 (The counselor collects information on students with whom he works who would probably not be referred to the school social worker and gives it to the principal). This item, along with item 12, would seem to indicate that some of the low performance rated counselor-candidates were somewhat more cooperative with other agencies, concerned about their own role in relation to other workers, but somewhat less concerned with client confidentiality in relation to other agencies.

A short summary of the exploratory search for patterns of response changes to practical situations which differentiate between high performance and low performance rated counselor-candidates suggests that, on the whole, there was not much change by either group as a result of the practicum experience. Change which did occur tended to be characteristic of a few individuals within the groups with more low performance rated counselor-candidates showing change to practical situations than high performance rated counselor-candidates. Patterns which indicated change for the high performance rated counselor-candidates would suggest that they became more concerned about the client understanding the cause of his problems; more concerned about the client in general; more concerned with confidentiality; more ready to discuss issues and problems with fellow workers; and more concerned about an opportunity to talk with parents. Patterns which indicated change for the low performance rated counselor-candidates would suggest that they became more concerned about the client, but responded to external concerns by manipulating the environment; less ready to confront other workers openly; concerned about confidentiality, but not with fellow workers; and more concerned about how they stand in the eyes of the teachers.

Assumption Two

The second assumption which guided this investigation was that there are patterns of personal characteristics which differentiate high performance and low performance rated counselor-candidates. The following discussion refers to an exploratory pattern search to identify personal characteristics which appear to discriminate between the groups. Variables involved in this search included biographical data taken from the _Counseling Questionnaire_ and coded scores on seven scales of the MMPI, the OSPE, and the NDEA Comp. Information on variables and coding is found in Appendices D and E.

Table 9 on page 97 gives cross-validated patterns of personal characteristics which differentiate between high performance rated and low performance rated counselor-candidates. Out of a total of 45 patterns, 21 or about one-half received some support in cross-validation. In Table 9, three patterns, 2, 10, and 11, appear although not receiving cross-validation support. They are considered because of their close relationship to other patterns and their overwhelming total number in favor of the high rated group.

Information from the data seems to show that, as with change response patterns, no single pattern came close to generally discriminating between the high and low performance rated groups. This would suggest that these groups might have been heterogeneous and not homogeneous. However, the patterns do indicate some interesting trends which may increase understanding of high and low rated counselor-candidates. Generally, the patterns characterized

TABLE 9

CROSS-VALIDATED PATTERNS OF PERSONAL CHARACTERISTICS WHICH DIFFERENTIATE HIGH PERFORMANCE RATED AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	4-3:12-1	7	2	5	1	12	3 NS
2.	9-1:11-2	19	5	8	9	27	14 S
3.	23-2: 9-1	16	6	9	4	25	10 NS
4.	9-1:10-1	26	16	15	14	41	30 NS
5.	12-1: 9-1	20	6	12	8	32	14 NS
6.	9-1:24-2	16	7	7	6	23	13 NS
7.	8-1: 3-2: 9-1	17	7	10	9	27	16 NS
8.	8-1:12-1: 9-1	20	6	12	8	32	14 NS
9.	16-1: 9-1:23-2	15	4	4	2	19	6 NS
10.	8-1:11-2: 9-1	19	5	8	9	27	14 S
11.	11-2: 9-1:10-1	19	5	8	9	27	14 S
12.	9-1:10-1:17-1	25	14	13	11	38	25 NS
13.	8-1: 9-1:10-1	26	16	15	14	41	30 NS
14.	8-1:9-1 :12-1	20	6	12	8	32	14 NS
15.	8-1:10-1:12-1	19	6	11	8	30	14 NS
16.	25-2:23-3	2	6	1	6	3	12 NS
17.	29-3:22-2	2	7	1	3	3	10 NS
18.	9-2:25-2	1	6	0	1	1	7 NS
19.	1-2:24-3	1	10	2	6	3	16 NS
20.	29-3:19-1	1	6	0	3	1	9 NS

TABLE 9--Continued

Pattern No.	Items & Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
21.	23-1:24-3	0	5	1	3	1	8 NS
22.	24-3:34-1	1	4	0	1	1	5 NS
23.	29-3:35-1	0	2	0	1	0	3 NS
24.	15-2:16-1:17-1	0	5	0	1	0	6 NS

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

a small proportion of the groups.

All patterns in favor of the high performance rated group, except one, pattern 15, contained variable 9 at level one, which indicates that they were guidance and counseling subjects. Patterns 4 and 5 indicate that the high rated individuals were guidance and counseling majors who had teacher's certificates and who were academic teachers. Pattern 2, which was not cross-validated but which had twice as many high rated as low rated individuals in the total sample, would add that the individuals in the high performance rated group tended more often to be secondary teachers than were individuals in the low performance rated group.

Triple patterns 8, 13, and 14 add to the above information that more high rated individuals, in combination with these other factors, were education majors. Pattern 15 (education major, possession of a teacher's certificate, and teaching an academic subject) favored the high rated group by more than 2 to 1. Patterns 10 and 11, although not receiving cross-validated support, for the total sample showed that the high rated group almost doubles the low rated group for being education majors, guidance and counseling majors, possessing a teacher's certificate, and teaching at a secondary level.

In terms of this sample it would appear that if one were an education major, guidance and counseling major, possessed a teacher's certificate, and taught an academic subject at a secondary level, his chances were two to one of being high rated.

Pattern 1 indicates that, for the high rated group, more of the academic teachers had fathers who were college graduates; while pattern 3 combines an average L scale of the MMPI with being a guidance and counseling major, and pattern 6 combines an average F scale on the MMPI with being a guidance and counseling major. The guidance and counseling majors who were high rated do not seem to feel any particular need to falsify their scores nor do they have difficulty with the items on the MMPI.

Pattern 7 is difficult to explain. It combines both education major and guidance and counseling major with the information that the individuals are married. The difference in favor of the high rated group is not striking (27 to 16) but it does suggest a trend. It is difficult to know whether the influencing factor was the majors of the individuals or the fact that they were married. Generally speaking, more low rated people were not guidance majors so the combination may be reflecting this. The combination also might suggest that more of the low rated individuals are young and therefore not married, or older and not married. Should the latter be the case, the pattern might be indicating that the high performance rated individuals are somewhat more stable in their personal lives.

Patterns 9 and 12 combine information about completion of some basic guidance courses to other variables already entered in the patterns. Pattern 9 adds completion of a course in occupational information to the two variables in pattern 3 (guidance and counseling major and an average L scale) and pattern 12 has completion of a course in measurement of aptitudes in combination with pattern 4 (guidance and counseling major and possession of a teacher's certificate). These combinations would not be unexpected in favor of the high rated group because these two courses are required in the guidance and counseling sequence at the University of Michigan.

There were eight patterns in favor of the low performance rated group. All except one, 24, involved some scale of the MMPI. Pattern 24 combines completion of the courses occupational information and measurement of aptitudes with not having had the course counseling process. This pattern was perfectly discriminating in that 6 low rated individuals and no high rated individuals had the combination. This would seem to suggest that the low rated individuals had had the tools and techniques courses, but not the process course in prior preparation for the practicum.

Turning to the patterns containing MMPI scales, pattern 16 involves a high L score with average K score for the low rated group. A high L, according to the test authors, does not invalidate the other scores but indicates that the true values are probably higher than those actually attained. This is of interest in the light of findings which will be discussed later that the individuals in the low rated group had somewhat more extreme scores on some clinical scales of the MMPI than did the high rated group. Perhaps the high scores were more extreme than they appeared.

A high Pd score on the MMPI is combined with an average score on the NDEA Comp to form pattern 17. The Pd scale indicates individuals who find it difficult to establish warm relationships and are somewhat rigid emotionally. A few more of the low rated individuals had this pattern than did the high rated individuals (10 to 3).

The low performance rated individuals who had pattern 18 were not guidance and counseling majors and received average K scores on the MMPI. Since the K score has been interpreted as trying to put one's best foot forward, it appears that these low rated individuals, who were not a part of the guidance and counseling graduate program, felt less of a need to put themselves in a favorable light than did the guidance and counseling majors.

A high F scale is combined with a low L scale in pattern 21 and a low Ma scale in pattern 22. The high F tends to indicate a person who was careless on the examination or unable to comprehend the items on the test. Of interest, is the fact that some low rated individuals had a low L scale on pattern 21 while other low rated individuals had a high L scale on pattern 16. This would tend to indicate a high degree of heterogeniety among these low rated individuals.

In pattern 20, a high Pd scale is combined with less than two years of work experience outside the field of education and a high Pd is combined with a low Si scale in pattern 23. As has been mentioned, a high Pd scale indicates inability to establish warm relationships; one who is emotionally rigid or shallow. Pattern 20 might suggest that some of these low rated individuals were young, lacking work experience or individuals who had not sought work outside the field of education. Perhaps these individuals, although unable to establish warm relationships, sought comfort through the role of a teacher and the type of relationship a teacher could have with a student; a close relationship but one which does not have to involve too much of self. In pattern 23, some low rated individuals had a low Si score which seems to indicate individuals who get very involved in extracurricular activities. Combined with a high Pd scale, this pattern was perfectly discriminating; 5 low rated individuals and no high rated individuals. These low rated individuals, who are unable to give of themselves emotionally, perhaps attempt to give in a more external way by being active in social affairs. It is interesting to conjecture why these type of individuals pursue guidance and counseling, which is such a close, personal relationship. It also might be this inability to establish warm relationships which caused them to be low rated. Further study and understanding of these patterns is needed.

In general, the search for personal characteristics which differentiate between high and low rated counselor-candidates indicated that high rated individuals tended to be counseling majors who taught academic subjects at a secondary level and the low rated individuals tended to be somewhat more extreme on scores on scales of the MMPI. However, as with patterns of response changes, differences were characteristic of a few individuals and not particularly common to the entire group.

Regression Analysis

The regression analysis attempted to predict high performance or low performance ratings from the variables in the study. In the case of the response changes to alternatives on the CSAI, the regression analysis was performed by categories as was the search. The coded biographical data, seven scales of the MMPI, and OSPE, and the NDEA Comp coded scores were analyzed together. Also, the actual raw scores for the OSPE and NDEA Comp, and the T scores on all 13 scales of the MMPI were submitted to a regression analysis by sex in an attempt to determine if, by sex, there were differences not already uncovered. Because the regression is completed by solving simultaneous equations and in some instances there were more variables than there were individuals, it was necessary to combine the initial and cross-validation samples into one total sample with an N of 96 to perform the regression analysis.

The regression analysis generates a linear regression equation of the form $Y = B_o + B_1X_1 + B_2X_2 . . . + B_kX_k$. The analysis was programmed for and performed on the IBM 7090 Executive System at the Computer Center of the University of Michigan. The following discussion presents the results of the regression analysis in the same organizational manner as the results of the search were presented.

Assumption One

The regression analysis was performed to determine the response changes which predicted practicum ratings for high performance and low performance rated counselor-candidates.

Category One: Situations Dealing with Counselor-Client Relationships

Table 10 shows the results of the regression analysis for situations dealing with counselor-client relationships

TABLE 10

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM CHANGE SCORES ON RESPONSES TO SITUATIONS DEALING WITH COUNSELOR-CLIENT RELATIONSHIPS

Step	F Ratio	Mulitple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	8.191[a]	.283	.080	.485	R. 19
2.	6.312[b]	.372	.139	.472	R. 29
3.	4.012	.418	.175	.464	R. 54
4.	4.450[b]	.462	.213	.456	R. 25
5.	3.076	.489	.239	.451	R. 38
6.	2.945	.513	.263	.446	R. 61
7.	3.193	.538	.289	.440	R. 26

[a] Significant at .01 Level

[b] Significant at .05 Level

The seven variables have a combined multiple R of .538 and account for about .289 of the variance in the practicum ratings. Three variables which entered the equation were significant. Response 19 (Have the principal contact the parents and seek their consent to a referral) was significant at the .01 level. It will be remembered that this item showed great change for the low performance group in the search analysis.

Response 29 (Helping the client see that smoking is not a solution but a symptom of the problem), and Response 25 (The counselor does not let the student smoke and later check his records for clues as to why he smokes) were both significant at the .05 level. Response 29 was found in several of the patterns which indicated change. Responses 19 and 29 seem to show somewhat more concern for the client and interest in grappling with the problems.

Category Two: Situations Dealing with Counselor-Teacher Relationships

Six variables entered the equation to predict practicum rating from change scores on responses to situations dealing with counselor-teacher relationships. As can be seen from Table 11, page 108, the six variables accounted for .212 of the variance and had a multiple correlation coefficient of .461. Two of the variables, Response 33 and Response 24 were significant at the .05

TABLE 11

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM CHANGE SCORES ON RESPONSES TO SITUATIONS DEALING WITH COUNSELOR-CLIENT RELATIONSHIPS

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	4.019[b]	.202	.041	.495	R. 33
2.	3.390	.273	.075	.489	R. 34
3.	5.601[b]	.358	.127	.477	R. 24
4.	3.180	.397	.157	.471	R. 41
5.	2.985	.429	.184	.466	R. 36
6.	3.174	.461	.212	.461	R. 7

[a] Significant at .01 Level

[b] Significant at .05 Level

level. Item 24 (The counselor sends an unsigned memorandum to the principal about the behavior of a teacher) was discussed in the pattern search because no high individuals changed on the variable and only three low individuals changed and that was in the direction of disagreeing with the item. Apparently, both groups see this as a type of behavior with which they cannot agree.

The counselor asks a client to leave the room while he listens to the teacher's side of the story in item 33. Change on this variable in the direction of agree for the high group and disagree for the low group predicts practicum rating. The high group seems to be more interested in getting at the problem but not with both in the room, while the low group seems to be somewhat more ready to skirt the issue for the time being.

Category Three: Situations Dealing with Counselor-Parent Relationships

This category contained items on situations dealing with relationships between counselors and parents. From Table 12, the six variables in this equation were able to account for .236 of the variance and had a multiple correlation coefficient of .486.

TABLE 12

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM CHANGE SCORES ON RESPONSES TO SITUATIONS DEALING WITH COUNSELOR-PARENT RELATIONSHIPS

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	14.129[c]	.362	.131	.471	R. 18
2.	2.918	.396	.157	.466	R. 13
3.	3.435	.433	.187	.460	R. 21
4.	2.238	.455	.207	.457	R. 30
5.	1.749	.471	.222	.456	R. 16
6.	1.621	.486	.236	.454	R. 8

[a] Significant at .01 Level

[b] Significant at .05 Level

[c] Significant at .001 Level

Only one variable, Item 18, reduced the error significantly. Item 18 entered at an F level of 14.129 which was significant beyond the .001 level. This item refers to a counselor reassuring a parent that there is nothing wrong with the daughter. This change variable also was very strong in several patterns in favor of the low group who disagreed more with the item. As discussed earlier, it appears that the low-counselor-candidates became less interested in avoiding problems when talking to parents, which shows somewhat more concern for the client.

Category Four: Situations Dealing with Counselor-Administrator Relationships

Situations dealing with administrator-counselor relationships were grouped in this category. Table 13, page 111, gives the results of the regression analysis for this category.

The six variables in the equation accounted for .178 of the variance and had a multiple correlation coefficient of .422. One variable, Item 21, was significant at the .05 level. It will be remembered that the pattern search tended to indicate somewhat fewer change variables for this category. The result of the regression lends support to this point.

Item 21 refers to the counselor reacting to a decision of the principal by telling him that he is too

TABLE 13

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM CHANGE SCORES ON RESPONSES TO SITUATIONS DEALING WITH COUNSELOR-ADMINISTRATOR RELATIONSHIPS

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	3.595	.192	.037	.496	R. 30
2.	4.150[b]	.279	.078	.488	R. 21
3.	3.408	.333	.111	.482	R. 7
4.	3.285	.377	.142	.476	R. 22
5.	2.124	.402	.162	.473	R. 27
6.	1.777	.422	.178	.471	R. 11

[a]Significant at .01 Level

[b]Significant at .05 Level

[c]Significant at .001 Level

busy to do him any favors in the future. From information on the pre-practicum means, both groups tended to disagree with the item. Results from the search showed that 4 high performance rated and 1 low performance rated individual moved towards agreement with the item. This item appeared to have strong agreement for both groups on their behavior, except a few high and 1 low individual are somewhat more willing to protest the principals' actions. This reflects somewhat more concern about the role and function of the counselor.

Category Five: Situations Dealing with Counselor-Counselor Relationships

In this category, situations were combined which dealt with counselor relationships with other counselors. From Table 14, it can be seen that the six variables accounted for .151 of the variance and had a multiple correlation coefficient of .389. One variable, response 6, reduced the variance a significant amount. This response suggested that a counselor ask his colleague to record some of his work and then compare it with some of his own.

TABLE 14

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATIONS COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM CHANGE SCORES ON RESPONSES TO SITUATIONS DEALING WITH COUNSELOR-COUNSELOR RELATIONSHIPS

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	4.132[b]	.205	.042	.495	R. 6
2.	2.788	.265	.070	.490	R. 4
3.	2.365	.305	.093	.486	R. 27
4.	1.888	.334	.112	.484	R. 8
5.	1.840	.360	.130	.482	R. 14
6.	2.254	.389	.151	.479	R. 28

[a] Significant at .01 Level

[b] Significant at .05 Level

[c] Significant at .001 Level

This variable did not enter any of the patterns during the search. However, the regression showed that as this variable increased, one unit, the dependent variable, practicum rating would decrease by one-half a unit. This indicates that some of the high performance people disagreed more with the item at the completion of the practicum.

Of interest in this category is the fact that three different responses to Situation 21 were mentioned in the regression equation. This situation deals with the amount of time a counselor spends with a relatively normal student. It would appear that the practicum had considerable impact on the counselor-candidates in this study on this issue.

Category Six: Situations Dealing with Counselor Relationships with other Pupil Personnel Workers and Agencies outside the School.

The final category of situations dealt with counselors' relationships with other pupil personnel workers and agencies outside the school. Of the variance, .203 was accounted for by the six variables in the equation and the multiple correlation coefficient of the six variables was .451.

Response 12 was significant beyond the .01 level. This item was found in several of the patterns which differentiated high performance rated from low performance rated individuals in the search analysis. (See Table 15, page 115) The search analysis showed that the high performance group disagreed with the item more and the low performance group agreed with the item more. The regression analysis supports this for it shows that as this item increases by one unit, the dependent variable decreases by .35 units. Therefore, as a score goes toward 3 (disagree) the practicum rating goes toward 1 (high performance rated) or as the score on the item goes toward 1(agree) the practicum rating goes toward 2 (low performance rated). The item refers to a counselor sending an employer the I.Q. and other information about a client. High performance individuals disagree with the item more than do low performance individuals. The regression analysis appears to lend some support to this item being pulled out in the search program to form patterns which differentiate between the group.

A review of this section on the results of the regression analysis on change variables which predict performance rating would indicate that the regression analysis tended to support the results of the search analysis. In most cases, change variables which appeared in the pattern search entered into the regression equations. In those instances where different change variables

TABLE 15

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM CHANGE SCORES ON RESPONSES TO SITUATIONS DEALING WITH COUNSELOR RELATIONSHIPS WITH OTHER PUPIL PERSONNEL WORKERS AND OUTSIDE AGENCIES

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	9.605[a]	.304	.093	.481	R. 12
2.	3.440	.354	.125	.475	R. 4
3.	2.776	.388	.151	.471	R. 39
4.	1.961	.411	.169	.468	R. 32
5.	1.851	.431	.185	.466	R. 25
6.	2.006	.451	.203	.464	R. 13

[a] Significant at .01 Level

[b] Significant at .05 Level

[c] Significant at .001 Level

appeared in the regression equations, they tended to add insights into the nature of the change.

Assumption Two

The second general area of exploration in this study was the differences in personal characteristics which differentiate high performance rated from low performance rated counselor-candidates. It was felt that this information would add insight into the data relative to the development of the counselor-candidates in the practicum.

In an effort to throw more light on the data, three separate regression analyses were run. One was performed using the coded information on the biographical variables, seven scales of the MMPI, the OSPE, and the NDEA Comp. A second was run on the thirteen scales of the MMPI using actual T scores, and raw scores on the OSPE and NDEA Comp between high performance and low performance rated women. The third was run on the same scores for high performance and low performance rated men. The following discussion will consider the results in the above order.

Coded Personal Characteristics

The six variables in the equation accounted for .219 of the variance in the dependent variable and had a multiple correlation coefficient with practicum rating of .468. Table 16 indicates that one variable, teaching field, was significant at the .01 level. As the score on teaching field raises on unit the dependent variable increases .38 of a unit. The academic teaching field was coded as a one, and non-academic teaching field was a two. Therefore, academic teaching field tended to be predictive of a high performance rating and non-academic teaching field tended to be predictive of low performance rating. (See page 117)

TABLE 16

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FROM BIOGRAPHICAL DATA AND CODED SCORES ON SEVEN MINNESOTA MULTIPHASIC PERSONALITY INVENTORY SCALES, OHIO STATE UNIVERSITY PSYCHOLOGICAL EXAMINATION, AND NDEA COMPREHENSIVE EXAMINATION

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	9.013^a	.296	.087	.483	Teaching Field
2.	3.250	.344	.118	.477	Guidance Major
3.	3.270	.385	.149	.471	School Level Taught
4.	2.998	.419	.176	.466	Teacher's Certifi.
5.	2.670	.447	.199	.462	F Scale, MMPI
6.	2.179	.468	.219	.460	Counseling Process

[a] Significant at .01 Level

[b] Significant at .05 Level

[c] Significant at .001 Level

Steps numbered 2, 3, and 4, while entering variables which are not significant, is of interest because the three variables, guidance and counseling major, secondary school teaching, and possession of a teacher's certificate, combined into patterns which seemed to differentiate high performance from low performance counselor- candidates. In each case, a score of 1 for the variables would tend to be predictive of a 1 rating (high) and a 2 or higher rating would be predictive of a 2 rating (low). The four variables in this equation account for .176 of the variance and have a mutiple correlation coefficient of .419.

Personal Characteristics of Women

Table 17, page 119, shows that six variables entered the regression equation and accounted for .316 of the varance with a multiple correlation coefficient of .562. The F scale on the MMPI was the most powerful predictor of practicum rating for women. It will be remembered that 16 low performance women compared to 3 high performance women were found to have a high F scale in the pattern search. Apparently, the low performance rated women have somewhat more trouble than the high performance women in handling the items on the MMPI.

The other variable to reduce the error significantly was the Psychasthenia (Pt) scale on the MMPI. This scale was not included in the pattern search. It would tend to indicate that the low rated women are somewhat more compulsive in their behavior than are high performance women.

Personal Characteristics of Men

Table 18, page 120, gives the results of the regression analysis on the thirteen variables for high performance

TABLE 17

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FOR WOMEN FROM SCORES ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY, OHIO STATE UNIVERSITY PSYCHOLOGICAL EXAMINATION, AND NDEA COMPREHENSIVE EXAMINATION

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	10.365[a]	.392	.154	.468	F Scale MMPI
2.	4.181[b]	.461	.212	.455	Pt Scale MMPI
3.	3.814	.513	.264	.444	D Scale MMPI
4.	1.869	.537	.288	.441	NDEA Comp
5.	1.410	.554	.307	.440	Hs Scale MMPI
6.	.697	.562	.316	.440	Pa Scale MMPI

[a] Significant at .01 Level

[b] Significant at .05 Level

[c] Significant at .001 Level

rated men and low performance rated men. The six variables in this equation were able to account for .206 of the variance and had a multiple correlation coefficient of .454. No variables significantly reduced the variance in the ratings. It is interesting to note that the six variables which entered the equation were all scales of the MMPI. Knowledge and aptitudes appear not to predict performance rating for men.

TABLE 18

REGRESSION STEPS, F RATIOS, MULTIPLE CORRELATION COEFFICIENTS, AND COEFFICIENTS OF DETERMINATION FOR THE PREDICTION OF PERFORMANCE RATINGS FOR MEN FROM SCORES ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY, OHIO STATE UNIVERSITY PSYCHOLOGICAL EXAMINATION, AND NDEA COMPREHENSIVE EXAMINATION

Step	F Ratio	Multiple Correlation Coefficient	Coefficient of Determination	Standard Error	Variable Entering Equation
1.	1.332	.191	.037	.504	Hy Scale MMPI
2.	1.176	.262	.069	.503	Si Scale MMPI
3.	1.600	.335	.111	.499	F Scale MMPI
4.	1.050	.374	.140	.498	Pa Scale MMPI
5.	1.369	.420	.177	.496	Pt Scale MMPI
6.	1.101	.454	.206	.495	Ma Scale MMPI

Summary

The results of the exploratory search and the regression analysis appear to be mutually supportive. Variables which were combined into patterns tended to enter the regression equations. Both analyses added insights into the data and the following summary combines the results of the two data analysis techniques.

Patterns of response changes as a result of the practicum experience tended to differentiate a small number of individuals in the groups. These patterns suggest insights into the effects of the practicum experience and provide information for further study and research.

High performance rated individuals showed more concern for the internal needs of the client, more interest in working with parents, more prepared to discuss issues openly with fellow workers, more concerned about confidentiality, and more certain of their role and function as counselors at the completion of the introductory practicum.

Low performance rated individuals showed more concern for external needs of the client, more interest in working with parents, more concerned about their role as counselors and about being placed in an administrative role, less ready to discuss openly issues with fellow workers, and less concern with confidentiality at the completion of the introductory practicum.

Results of the analyses to ascertain personal characteristics which differentiated between high performance and low performance rated counselor-candidates indicated that the groups tended to be heterogeneous. Differences did appear which were characteristic of a small number of individuals within the groups. These patterns suggest insights into the composition of the groups and provide information for further study and research.

The high performance rated counselor-candidates tended more often to be guidance and counselor majors who taught academic subjects at a secondary level.

Some low performance rated counselor-candidates were more extreme on scales of the MMPI, indicating more difficulty with the items on the test, inability to establish warm relationships, compulsiveness in their behavior, and participation in outside activities. Some low rated individuals possessed a pattern which indicated that they had had courses related to the techniques of guidance but not the process of the counseling interview.

CHAPTER V

SUMMARY AND CONCLUSIONS

This study utilized a new technique to search data for characteristic patterns in an exploratory investigation to generate hypotheses about the phenomenon present in a counseling practicum.

Students who had completed an initial practicum at the University of Michigan during four semesters were used for the sample. Each subject completed a series of tests: the Counselor Questionnaire, Ohio State University Psychological Examination, (OSPE), Minnesota Multiphasic Personality Inventory (MMPI), and the Counselor Situational Analysis Inventory (CSAI). At the completion of the semester practicum, subjects again took the CSAI and also took the National Defense Education Act Comprehensive Examination, University of Michigan Form (NDEA Comp). A total of 162 individuals completed the initial practicum during this time, but data was not available on three so the total N in the study was 159.

During each semester, supervisors responsible for the experience of a particular counselor-candidate made periodic ratings relative to the performance and growth of each candidate. Then, at the end of the semester, supervisors were asked to rate each of their counselor-candidates on a performance scale from high to low relative to the level of performance expected of a first semester practicum student. In this manner, 48 students were high rated, 63 were average rated, and 48 were low rated. For the purpose of this study, comparison was made between the high rated and low rated counselor-candidates.

Randomly, 30 high rated and 30 low rated individuals were selected to form an initial group for investigation. The remaining 18 high and 18 low individuals were used to cross-validate the initial results. The search analysis was performed on change scores on items of the CSAI and coded personal characteristics to discover patterns of characteristics which differentiated between the initial group of high performance and low performance counselor-candidates. Those patterns which seemed to describe one or the other group were submitted to cross-validation on the second group of 18 high and 18 low individuals. Those patterns which received support in the cross-validation were reported and discussed in Chapter IV.

Also, the change scores on the CSAI and coded personal characteristics scores were submitted to a regression analysis in an attempt to predict performance ratings. In this phase of the data analysis, initial and cross-validation groups were combined into one sample because of the large number of simultaneous equations that had to be solved. Variables entering the regression equation in each separate analysis were reported and those which significantly reduced the error in prediction were discussed.

Summary of Findings

The results of the search analysis indicated that little change had taken place for either high performance rated or low performance rated groups. Patterns which indicated change tended to be characteristic of individuals within the groups and not common to the group as a whole. More change patterns favored individuals in the low rated group than individuals in the high rated group.

Some high rated individuals showed more concern about the internal needs of the client and his ability to see the causes of his problems. A few low rated individuals showed more concern for the client but this concern generally was related to external needs such as scheduling.

While the high rated group had no patterns which indicated change in their response to situations dealing with teacher relationships, some low performance rated individuals became more concerned about their position in the eyes of the teachers and more concerned about defining their role.

Both groups had numerous patterns which indicated change in response to situations dealing with parent-counselor relationships. These patterns tended to suggest that both groups were more interested in working with parents.

In situations dealing with administrators' relationships with the counselor, patterns which favored high performance rated individuals indicated that they were somewhat more ready to stand up to the principal, to defend their role as a counselor, and not to allow the administrator to interfere with their functions. Some low rated individuals moved in similar directions, being less cooperative with the administrators if it affected their relationship to teachers.

High rated individuals exhibited patterns of no change on situations dealing with counselor-counselor relationships. Patterns in favor of low rated individuals indicated they were more prepared to discuss ethical issues with other counselors individually rather than in groups.

Patterns indicated that some high rated individuals became more active in their contacts with other pupil personnel workers if the welfare of the student was involved. Low rated individuals manifested patterns which indicated that they became more cooperative but less concerned about the confidentiality of information about students.

Results from the search for patterns of personal characteristics showed that high rated and low rated groups were heterogeneous. Some patterns which were characteristic of a few individuals in each group were noted.

The high rated individuals tended more often to be education majors, guidance and counseling majors, and secondary teachers of academic subjects.

Low rated individuals showed discriminating patterns in several areas. They tended to be somewhat less capable of responding to the items of the MMPI. A few low rated individuals appeared to be quite rigid emotionally and yet active in extra-curricular activities.

Results from the regression analysis indicated that change scores on the alternatives in the six categories of the Counselor Situational Analysis Inventory accounted for some of the variance in practicum rating.

The significant variables seemed to indicate that high rated individuals were more concerned with client internal needs, ready to meet issues head on, more concerned with their role, and more concerned with confidentiality of information. Low rated individuals were less concerned about confidentiality, less ready to meet issues head on, and more concerned about external problems of the client.

Teaching field predicted practicum rating significantly. More high rated individuals were academic teachers and more low rated individuals were non-academic teachers.

High rated women appeared to have less trouble with items on the MMPI and were less compulsive about their behavior than were low rated women.

There were no significant differences on personality, aptitudes, and achievement variables between high performance rated and low performance rated men.

Conclusions

The conclusions of this study are the hypotheses which were generated from the exploratory search and regression analysis of the data. This section will consider these hypotheses, a discussion of the rationale underlying each, and some of the implications of the hypotheses for counselor education.

Hypothesis 1: High performance rated and low performance rated counselor-candidates exhibit a wide variety of personal characteristics and are heterogeneous.

The results of both the search and regression analyses seemed to indicate this hypothesis. Not only were there few patterns of change which characterized either group of counselor-candidates, but also only a relatively few patterns of personal characteristics appeared to differentiate the groups. Differences which did exist between the groups were common to a small number of individuals but not to the group as a whole.

While perhaps this hypothesis is not surprising, it may represent one of the most important implications arising from this study. It suggests that personal characteristics may not be related to a criterion of counselor-candidate performance or success--that differences in performance as counselor-candidates may exist but these differences are not explained by personal characteristics.

An explanation of this hypothesis might be that the instruments used in this study were not sensitive enough to measure the traits which exist. However, since a number of research studies have used these instruments on a variety of counselor-candidate groups and have been unable to report consistent results, it might be possible that the instruments were not the cause of the results, but that the groups tended to be heterogeneous.

A second argument which could be advanced to explain failure to discover differences of personal characteristics between groups of counselor-candidates is the possible lack of agreement among the raters on the criterion. However, information on the reliability of some of the ratings was available (Table 1, page 50) and the reliabilities tended to suggest that some confidence could be placed in the ratings. Therefore, it would seem that since some confidence can be placed on the performance ratings in this study, further investigation of the hypothesis should be made.

Counselor-candidates appear to exhibit differential levels of performance in a counseling practicum. The question is whether or not different personal traits are related to these differences in counselor-candidate performance. This hypothesis would suggest that they are not.

It appears from the data in this study that there are many different kinds of individuals who are high performers and low performers.

Perhaps one needs to begin to look for new explanations for the differences between levels of counselor-candidate performance. It may be that the difference is more in what the counselor-candidates do than who they are. Attention ought to be turned to looking at the differences in behavior of high and low rated counselor-candidates.

It would appear necessary to redefine counselor performance to include the level of client learnings. The outcome of the counseling for the client may represent a more meaningful way of looking at the performance of a counselor-candidate. In an interview, a rater observing may judge the counselor-candidate to be a low performer, yet the client may be experiencing significant learning.

Hypothesis 2: High performance rated and low performance rated counselor-candidates exhibit little change in response to common counseling situations as a result of the introductory practicum.

The number of cross-validated patterns which indicated no change and the fact that all patterns which indicated some change contained one or more no change items suggested this hypothesis. While some change patterns were characteristic of a few counselor-candidates in both groups, most patterns indicated no change.

One plausible explanation is that the CSAI was not sensitive enough to measure the change that did take place. A new and experimental instrument, the CSAI needs more study before its usefulness can be ascertained.

It is possible that one semester of the practicum may be insufficient to result in much change. About one-half of the subjects in this study completed the practicum over a summer session of six or eight weeks, meeting daily. The rest were in the practicum for a semester of fourteen weeks and met once a week. At the beginning of the practicum, counselor-candidates had to get acquainted with instructors, supervisors, other counselor-candidates, and the general surroundings of the counseling laboratory prior to beginning counseling with clients. Then, with the mechanics of test selection, filing, writing of case reports, performing duties such as receptionist and supervisor of the testing room, counselor-candidates may have been so occupied that there was not sufficient time or opportunity for significant learnings until well into the experience, if at all.

The expectation that the type of change which occurs in an introductory practicum is change in response to common counseling situations also must be questioned. Instead of this type of change, perhaps the development that occurs is more related to how the counselor-candidate sees himself, his attitudes towards other human beings, and his professional relationship to his role and function as a counselor. It may well be that one type of change preceeds the other and that they represent different levels of development for counselor-candidates.

Another issue which could be raised is whether or not the purpose of the practicum is to change behavior on the part of counselor-candidates. Perhaps it is an opportunity to assess the performance of counselor-candidates at the completion of their training prior to endorsement.

Other goals and purposes could be advanced, but a cursory glance at the literature reveals little attention to this issue. In the wake of widespread endorsement and support of the practicum, goals and purposes have not been clearly defined. It seems necessary to consider this question, and when goals are identified, practicum experiences can be developed which attempt to meet these goals.

Hypothesis 3: High performance rated individuals are more consistent in their insights into their behavior throughout the practicum than are low performance rated individuals.

Of the patterns which indicated some change to common counseling situations, the majority were in favor of the low performance rated group of counselor-candidates. This would indicate that the low rated group manifested somewhat more change than did the high rated group. These results seem to suggest that the high performance rated counselor-candidates possessed insights into their methods of operation at the beginning of the practicum which persisted over the period of the experience.

In contrast, the change patterns which were characteristic of a few low performance rated individuals would suggest that their responses to some common counseling situations did not persist throughout the practicum.

Because they are closely related, further discussion of hypothesis three will be integrated with the analysis of hypothesis four.

Hypothesis 4: Counselor-candidates who have had prior learnings and experiences similar to those in a counseling practicum have a better chance of being rated as high performers.

Results from both the regression and search analyses on patterns of personal characteristics which differentiated between the groups indicated that academic, secondary teachers were more often high rated on the performance criterion. The non-academic, secondary teachers; elementary teachers; and others more often were found in the low performance group.

A discussion of this hypothesis must consider the possibility of bias in the supervisor ratings. Since most of the supervisors tended to be or had been secondary, academic teachers, they might have been consciously or unconsciously favoring or rewarding their like kind. While perhaps an influencing factor, the results of both the regression and search analyses suggested that there were differences in the background of high performance and low performance rated counselor-candidates. Therefore, other explanations must be considered.

The counseling laboratory at the University of Michigan typically draws its clients from high school students who are concerned about college and career plans. These students are those with whom academic, secondary teachers have had experience. This hypothesis suggests that this prior experience may be an influencing factor in the high performance ratings which favored the academic, secondary teachers. The students and their problems, not being new, the counselor-candidates who had had prior experiences would perhaps be less anxious in approaching the counseling of these students than would those counselor-candidates who had had different backgrounds.

Looking at it another way, how would these "high performers" who had had secondary experience perform in a counseling practicum which had elementary clients? (Or junior high, or college, or adult). Would the elementary teachers now be high raters? If so, this would suggest that the structure of the practicum affects the performance ratings and possibly the performance of the counselor-candidates.

Apparently, the practicum rewards the behavior of those people who have had prior related learnings and experiences. This is related to hypothesis three. It is possible that the reason for the insights of high performance rated individuals into how they would operate at the beginning of the practicum is a result of these prior experiences. Their behavior, then, is rewarded throughout the practicum and, thus, it tends to be consistent. What changes do take place seem to be small, in keeping with expectation, rewarding, and probably persistent.

Turning to the low rated individuals, it is possible that, although they made larger changes, the changes will not last. If the experiences of the practicum are somewhat newer to them, the practicum will be less rewarding. This could cause less consistent behavior, and possibly not such lasting changes.

Jones (37), in studying persistence of attitude change as a result of a counselor education program, noted that, although all significant differences continued to persist after six months, the differences were less. It would be interesting to know if those individuals who had not experienced a successful practicum had made most of the regression. If such was the case, it would support this hypothesis and present important implications to counselor educators.

If the change manifested by the low performance rated individuals is less likely to persist, continuous supportive experiences beyond the practicum are needed. The development of the counselor does not stop at the end of the practicum or formal education program. Those in charge of practicum experiences tend to be concerned about the high performance rated counselor-candidate who might make a good doctoral or specialist candidate. Yet, it may well be that the low rated individuals who become counselors will come into contact with as many or perhaps more clients throughout their professional careers. This implies that counselor educators might well spend more time and effort discovering meaningful follow-up experiences for the low rated counselor-candidates after the practicum experience.

Also, counselor education has tended to provide the same practicum for everyone; even though counselor-candidates were preparing for different levels of counseling. It generally has been thought that the age, sex, or background of the client was not an important influencing factor in the education of counselor-candidates in the practicum. What seemed to be important was the opportunity for the student counselor to work with people. This hypothesis questions this idea and suggests that practicum experiences might best be related to prior experiences and expected goals of the counselor-candidates.

Hypothesis 5: At the completion of the introductory practicum, some high performance rated counselor-candidates are more concerned with client internal needs and some low performance rated counselor-candidates are more concerned with external needs of the client.

The results of the search analysis of category one on the CSAI which contained situations related to counselor-client relationships seemed to suggest this hypothesis. While a large difference did not exist between the groups, patterns indicated that some high performance rated individuals moved in directions of assisting the client in seeing the causes rather than the symptoms of his problem. Patterns also indicated that some low performance rated counselor-candidates were more concerned about the client, but tended to operate by manipulating the client's external world.

It is possible that some high rated individuals were more aware of how to manipulate such things as the client's schedule because of prior experiences and thus could focus more upon the internal needs of the client. It might have been necessary for some low rated individuals to arrive at a point of greater concern through external manipulation before they could progress to other concerns. This, of course, assumes that the two different levels of concern are hierarchical and progressive.

A follow-up of the low rated individuals through a second practicum to see if they become more concerned about the client's internal needs is necessary to illuminate this hypothesis.

Hypothesis 6: At the completion of the introductory practicum some high performance rated counselor-candidates are more prepared to confront other workers with issues if they affect the client than are some low performance rated counselor-candidates.

Several patterns from various categories gave insights into this hypothesis. In their changes on situations dealing with teachers, parents, administrators, and other workers, some high performance rated individuals appeared more ready at the end of the practicum to confront issues head on in an attempt to resolve the problem for the betterment of the client. This appears to be in an attempt to resolve conflict situations.

Some low rated individuals also seemed more prepared to resolve the conflict situations, but they tended to change in directions which suggested they would attempt to avoid the issue or skirt the situation in hopes this would alleviate the problem.

This difference in approach to conflict situations might be reflecting the different prior experiences of the counselor-candidates. If the high performance rated individuals saw the practicum as supporting and rewarding their behavior, they would become more secure in their roles, and therefore better able to confront other workers with issues.

The low rated individuals, not seeing the practicum as rewarding but perhaps threatening, would tend to be less secure in their behavior and therefore less able to deal with the conflict situations directly. They would tend to be more anxious about the situation, less sure of themselves and their role, and therefore less effective. However, not wanting these situations to jeopardize their own position nor the welfare of the client, these low rated individuals would tend to avoid the situations rather than deal with them effectively.

If this hypothesis should be supported in further research, it would seem that counselor educators in the practicum, or somewhere in the preparation program, should deal with effective means for handling these types of conflict situations, especially for the low performance individuals.

Hypothesis 7: Some low performance rated counselor-candidates exhibit extreme personal characteristics such as compulsive behavior and inability to develop warm relationships.

Results of both the search and regression analyses on personal characteristics of counselor-candidates indicated several discriminating categories which are descriptive of a few low performance rated counselor-candidates.

These patterns tend to suggest that some low rated individuals were more compulsive, less able to develop warm relationships, and emotionally rigid and shallow. These patterns were characteristic of a small proportion of the low rated group.

These descriptions of the low rated individuals are similar to those resulting from other research on personal characteristics of counselor-candidates. (See Chapter II). However, other studies have tended to generalize these traits to the entire group of low rated counselor-candidates. It is possible that, since most of these studies tended to use group effect techniques, i.e., t tests or analysis of variance, extreme scores for a few individuals may have affected the entire group's scores.

This hypothesis suggests, then, that while counselor-candidates appear to be heterogeneous as a group, there are some distinctive differences for a few individuals. If this is so, careful study of individual counselor-candidates is needed in order to ascertain these differences and discover their implications for counselor development, performance, and preparation.

Implications for Further Research

One of this investigator's underlying objectives in this study was to utilize an innovative research technique in an attempt to ascertain its implications for research in counselor education. The technique of searching data for patterns in an effort to generate hypotheses for further study and examination appears to have promise. While the hope is that new insights will arise, this will depend upon the nature of the experimental design and the quality of the data searched. Much of what is found may be already known or may conform to expectations. However, a few insights undoubtedly will appear and these will provide avenues for new thinking and research.

Several of the hypotheses (5, 6, and 7) generated in this study were not unexpected. However, the other generated hypotheses add insights, question expectations, and suggest new areas for critical thinking.

The nature of the change which was manifested in the practicum by high and low performance rated counselor-candidates and the different backgrounds and experiences which they exhibited suggest a re-examination of the practicum experience.

The reader is cautioned that the following is a proposal and does not constitute results or conclusions from the data.

The practicum experience should be developed in such a way that it provides for the wide variety of individual differences and prior learnings of the counselor-candidates. This might be best handled through a systems design where the learner (counselor-candidate) becomes the focal point of the learning experience. A wide variety of experiences would have to be available so as to meet the needs of the counselor-candidates.

In this type of design, the supervisor assumes the role of a tutor who assists the counselor-candidate in his assessment of his past experiences and learnings which relate to the practicum, present needs, and those tasks and experiences which will help meet these needs. The supervisor helps the counselor-candidate select his learning experiences within the system and then assists him in their integration and internalization. This proposal would require careful study and examination in order to ascertain its value.

Another suggestion which arises from the generated hypotheses is that counselor educators re-examine the definition of counselor-candidates performance to include client outcomes of the counseling interviews. Attention also should be given the differences in behavior between levels of counselor-candidate performance as well as differences in personal characteristics.

The following suggestions represent other types of research which might be related to the hypotheses of this study.

1. Investigations into the nature of the change in attitudes and response to counseling situations as a result of the practicum need to be launched. This study should be replicated using different samples and perhaps different instruments to measure change. Studies should attempt to discover the kinds and degree of the change process.

2. An experimental study comparing a systems designed practicum to a traditional one would greatly increase understanding of the two approaches.

3. The role of the supervisor within the counseling practicum needs close examination. The investigations should consider the effects of the supervisory relationship, role expectations, ways of approaching supervisory situations, and a comparison of supervisory approaches.

4. Research efforts need to be extended into understanding the kinds of prior learnings and experiences counselor-candidates bring to the counseling practicum, and the types of experiences necessary in the practicum to meet the needs of the counselor-candidates.

5. And finally, further research using the search technique is necessary to assess its value and help

create guidelines for research in this manner. In addition, more empirical research should be performed in order to more fully understand the complex phenomena of human behavior, learning, and development. The computer provides the capacity to study phenomena at a greatly accelerated rate and intensity, and thus lead to more understandings and better conceptualizations about human characteristics. In order to develop this type of research, more innovative and adaptive techniques utilizing the computer need to be explored and reported.

APPENDIX A

COUNSELOR SITUATIONAL ANALYSIS INVENTORY

CATEGORY ONE: SITUATIONS DEALING WITH COUNSELOR-CLIENT RELATIONSHIPS

Situation One

A student has high aspirations toward professional level occupations. Tests indicate mediocre ability. After the tests have been interpreted to the student, he still maintains overly high aspirations.

If I were counselor, I would -

1. Schedule him with "tough" courses, hoping that a few failures will help change his mind
2. Refuse to schedule him for "tough" courses without written permission from the parents
3. Ask the student to bring his parents in for a conference with me
4. Let the student pick his courses and stop worrying whether or not he will make satisfactory marks
5. Help the student improve his study methods and habits so he can improve his marks
6. Give him another group of tests on the assumption that tests always involve an element of error
7. Schedule a series of conferences with the boy hoping that his aspirations will gradually be lowered as he is able to talk about them
8. Discuss his aspirations with teachers and enlist their aid in helping him become more realistic
9. Hand pick his courses so that he will have teachers who will give him a "break"
10. Assist him to work out a professional career plan which is the best possible for him even though you feel the likelihood of his succeeding is small
11. Confront him with the evidence that there is only a small chance of his succeeding in a profession

Situation Two

As an interview unfolds, a verbal and very expressive counselee reveals his problems and concerns. The counselor realizes these are not the problems of a normal student and feels inadequate to handle them.

If I were counselor, I would -

12. Begin making a referral as soon as I realized the need for one
13. Not schedule any more interviews until preparations had been completed for a referral
14. Visit the home, talk to the parents, and ask them what they wanted to do
15. Permit the student to talk to you whenever he wants to, whether or not a referral is possible
16. Not schedule any more interviews even if there is no place to refer the student
17. Contact the parents immediately and get their consent to a referral
18. Encourage the student to continue his contacts with you until a referral can be made
19. Have the administrator contact the parents and seek their consent to a referral
20. Structure all interviews so only questions of an educational/vocational nature are discussed
21. Use the services of the social worker to have a Rorschach administered to the boy

Situation Three

In a school where the rules against smoking are severely rigid, a boy comes for counseling and says he has an important problem to discuss. The boy is nervous and pulls out a cigarette.

If I were counselor, I would -

22. Send him to the principal for some kind of disciplinary action

23. Take him away from the school so he can smoke and feel comfortable as he talks to you

24. Don't let him light up the cigarette

25. Don't let him light up the cigarette and, after he leaves, look in the records for clues as to why he smokes

26. Encourage him to smoke as a tension reducing device

27. Call up the principal and ask his permission for the boy to smoke

28. Give him a lecture on the physical dangers of smoking

29. Help him see how smoking will not help toward the solution of the problem but is only a symptom of it

30. Express your understanding of his urge to smoke, but ask him to refrain while on school property

31. Convey your displeasure to him by your expression, but let him continue if he doesn't take the hint

Situation Four

A high school girl with more than average ability tells the counselor she does not want to go to college. She prefers to work in a store as a clerk or possibly look forward to marriage and possibly a family. Teachers recommend to the counselor that she should be persuaded to go on to college.

If I were counselor, I would -

32. Arrange for her to talk to a woman who is an excellent example of a college graduate, career woman, and mother

33. Call a conference for the parents and for teachers who have the girl in class

34. Go over with her some of the government literature on how important it is for women to have some work skills, particularly those who have ability

35. Give her a Strong Vocational Interest Blank for Women

36. Show the girl how wrong it is not to use one's ability

37. Explain to the teachers how this girl has a right to choose her own way of life, etc.

38. Investigate the home situation and find out how the parents have influenced the girl's attitudes

39. Search the school records for clues as to why the girl lacks motivation or what her real problem is

40. Talk to some of her friends and see what they can do to influence her

41. Assist her to find a clerking position in a company known for its desirable personnel practices

Situation Five

A girl has suddenly become concerned about her post-high school plans. She has known a wide range of abilities and has broad interests. She has expressed a concern that no one helps her much; they keep telling her she can do anything she chooses to do.

If I were counselor, I would -

42. In your contacts with her, look for some deeper problem that is preventing her from making some kind of career commitment

43. Give her the recently developed Kuder Preference Record, Occupational form

44. Give her the Occupational Outlook Handbook and encourage her to browse in it

45. Discuss with her what she would want in a college

46. Hold a conference with the girl and her parents

47. Make arrangements for her to talk to a few outstanding career women about their occupations

48. Question her about plans for marriage and how these fit into possible careers

49. Reassure her that she will find a career some day and not to worry about it while she is still in high school

50. Give her a book to read, one having to do with the education of women and the contributions women make to the world of work

51. Arrange for her to visit nearby industries that employ women in responsible positions

Situation Seven

A counselor has had several short contacts about a program of studies with Bill, a ninth grade student. Bill has always been somewhat uneasy in his presence.

If I were counselor, I would -

62. Work all the harder to establish a relationship with Bill

63. Talk to Bill's parents about his program of studies

64. Feel I was a failure if I could not get a relationship

65. Ask Bill whether he would like to have another counselor

66. Try to find some area of mutual interests for our discussions

67. Take the initiative and make out a program of studies for Bill

68. Persuade Bill that he is avoiding his problem

69. Place future initiative for contacts solely with Bill

70. Design a program of studies for Bill but allow him to decide whether to follow it or not

71. Discuss with Bill the reason for the strained relationship

CATEGORY TWO: SITUATIONS DEALING WITH COUNSELOR-TEACHER RELATIONSHIPS

Situation Fourteen

At a faculty meeting, one of the business education teachers publicly said, "Counselors in this school are dumping all the poor students in our courses, and we're getting pretty tired of playing nursemaid to all the illiterates and incompetents."

If I were counselor, I would -

1. Challenge the validity of this statement and request proof for such a damaging accusation
2. Indicate that the business education faculty has not recognized the need for training office clerks below the secretarial level of skill
3. Question individual members of the business education department as to whether they agree with the attitudes expressed at the faculty meeting
4. Point out that counselors really have little influence upon classes selected by students
5. Refuse to engage in any debate on the subject and save your energy for more important matters
6. Raise the question of what teachers expect from a counselor and how a counselor's work is hampered by departments that want to blame everyone but themselves for their problems
7. Dismiss the comments on the assumption that every department would like to have all the bright students in classes
8. Suggest that all teachers become more actively involved in scheduling students for classes, then they can blame only themselves

Situation Fifteen

An English teacher came storming into a counselor's office one afternoon after school. She felt the counselor was always taking a student's part in any controversy. One of her students that very afternoon had reported that the counselor, during an interview, had gone along with some rather damaging remarks about a member of the English department.

If I were counselor, I would -

9. Reassure the teacher that you always defend teachers in your interviews

10. Ask the teacher to bring the student who had made such a statement to your office

11. Question the teacher as to why she felt so defensive about the student's remarks

12. Offer to go to a departmental meeting and discuss the problem of counseling pupils who complain about teachers

13. Suggest that if the English teachers were more alert to the needs of children they would not generate such hostility from students

14. Promise that in the future you will discourage students who want to use you to complain about their English teachers

15. Listen politely to the teachers and then forget it

16. Take the offensive and indicate that you are tired of teachers who do not trust your professional integrity

Situation Seventeen

In your interviews with students, you are continually getting complaints about a mathematics teacher who is apparently eccentric in his relationships with students. They complain about physical punishments, temper tantrums, and conduct more like a six-year-old than an adult.

If I were counselor, I would -

17. Take the complaints to the principal whose job it is to supervise the teachers
18. Defend the teacher to students who complain
19. Tell the students to take their complaints to the teacher and not to you
20. Do not permit the students to discuss a teacher during interviews
21. Take the complaints to the teacher in question and ask if something can't be done about it
22. Talk to a friend of the teacher in question and see what can be done to help the teacher
23. Quit worrying about it, anticipating that the teacher's behavior is obvious to everyone and nothing can be done about it anyway
24. Send an unsigned memorandum to the principal indicating the nature of the teacher's behavior and how it is affecting the morale of the students

Situation Nineteen

One of the teachers physically pushes a boy into the counselor's office and wants him to "straighten out the boy." Before the counselor can catch his breath, the teacher launches into a tirade about the boy, his brothers, and sisters, his parents, and ancestors.

If I were counselor, I would -

25. Tell the teacher to be quiet
26. Encourage the teacher to give you any other information he has about the case
27. Ask the boy to leave the room and lecture the teacher about his impulsive behavior
28. Ask the teacher to leave the office with you, continuing the teacher's reactions to the boy out in the hallway
29. Interrupt the teacher and, without further discussion, tell him to meet you in your office after school
30. Ask the teacher why he referred the boy to you
31. Tell the teacher you will handle the situation
32. Ask the teacher to leave your office and proceed to discipline the boy
33. Ask the boy to leave the room while you hear the teacher's side of the story
34. Send the boy to the principal's office for discipline and tell the teacher you will see him during his free period

Situation Twenty

One of the eighth grade girls has had interviews with the counselor almost every other day for a semester. During the lunch period in the faculty eating place, one of the teachers asks the counselor whether he was aware that the girl had been talking about her "analysis." Some of the teachers were wondering what is happening and why these interviews have to continue for so long.

If I were counselor, I would -

35. Tell the teachers you're not a psychiatrist and what you do is strictly professional counseling, nothing else

36. Good humoredly, pay no attention to their remarks and change the subject for discussion

37. Thank the teachers and the next time the girl comes to your office ask her about her "analysis"

38. Explain to the teachers that this girl has been a problem and that you are hoping to refer her to a child guidance clinic

39. Discuss with the teachers the possibility of playing a tape recording which you made of a counseling interview, as a way of explaining what counseling is all about

40. Show your indignation at the inferences they are drawing from the girl's statements

41. Explain to the teachers that the length of number of interviews varies considerably from student to student

CATEGORY THREE: SITUATIONS DEALING WITH COUNSELOR-PARENT RELATIONSHIPS

Situation Eight

A fifth grade student shows more than usual concern about his career plans. His father has been urging the boy to see his counselor about some tests which might help him make an early career choice. In this way, the father hopes that his son can concentrate upon school subjects and activities related to his choice and not waste his education. After the counselor and boy discuss career ideas at length, they decide that tests will not add much to the information already available from the regular testing program of the school. The father is quite upset by this decision and tries to make an appointment to see the counselor.

If I were counselor, I would -

1. Avoid making an appointment until after the father has "cooled down" and can listen to reason
2. Welcome the opportunity to visit with the father, hoping to convince the father that elementary school experiences contribute little to career development
3. Tell the father, if he wants his boy to make a choice, that he needs a fortune teller more than a counselor
4. Make an appointment and, in your conference with him, search for the "real" need which compels the father to force such an early choice upon his son
5. Alert the principal that you want him to attend any conference with the father, hoping that the principal's presence will lessen the father's hostility
6. After making an appointment with the father, call the mother and invite her to come to the conference so that both will be acquainted with the outcome of the conference
7. Suggest that you will confer with him at home so that his wife and son can also participate
8. Accept the appointment and invite the boy to come also, hoping you and the boy together can convince the father that a career choice at this time would not be a realistic choice

Situation Nine

At a conference with the counselor a father and mother become very hostile about teachers and students in the school. They feel that the atmosphere of the elementary school is not one that will benefit their boy and threaten to enroll the boy in a private school known to the counselor. The counselor is very much aware that, for admission, the private school asks for a recommendation from the counselor.

If I were counselor, I would -

9. Indicate that you would have to give a recommendation to the private school for a transfer and that their attitudes are hardly cooperative ones

10. Reassure the parents that the school's atmosphere and the teachers are really not so bad

11. Send the parents to see the principal if they have any complaints

12. Question the value of a private school for a boy who cannot adjust to the public school

13. Encourage the parents to express their feelings freely because they might reveal the "real" problem

14. Question the parents about their general attitudes toward the school system and how they probably undermined the boy's faith in his school and teachers

15. Encourage them to shift schools if they lack confidence in the present one

16. Call the principal into your office so that he can be apprised of the parents' complaints about the school

Situation Ten

In her work with a third grade girl, a counselor finds that the pupil's interests cover a wide range of activities. Interviews are filled with discussions of these interests and what the pupil plans to do about them in the future. A call from the mother indicates that she is concerned about the fact that a counselor would talk to her daughter so many times and wondered what the girl was discussing with the counselor.

If I were counselor, I would -

17. Invite the parent to your office to review the nature of each conference with her daughter

18. Reassure her that there is nothing wrong with her daughter

19. Tell her to question her daughter about her interviews with me

20. Explain that counselors are not psychiatrists or psychologists

21. Tell her about the contents of your last interview with her daughter

22. Ask her if she is not interested in her daughter's educational development and if she does not trust the school in this regard

23. Refer the mother to the principal who is supposed to interpret the educational program of the school to all parents

24. Volunteer to visit the home when the girl is at school and when she would not be embarrassed by the counselor's presence

Situation Twelve

The son of a school board member has been in the counselor's office on several occasions, discussing his career plans. He is a very able boy, but he doesn't want to go to college. His parents are unhappy about the boy's aspirations. They have also expressed concern that the counselor has permitted the boy to discuss his own ideas and has not "pushed" college.

If I were counselor, I would -

25. Tell the parents that you work with their boy as you would any other--and that means that you don't try to "sell" anyone on the idea of going to college

26. Ignore how the parents feel and go about your business

27. Invite parents and the boy to your office for a conference hoping to reconcile the differences among them

28. Go to the administrator and explain your philosophy that each individual has a right to self-determination

29. Call the boy into your office, discuss how his parents want him to go to college, and why a person with ability ought to use it

30. Hold your ground against all pressures and maintain a good working relationship with the boy

31. Reassure the parents that all will be OK, and look for the "real" problem in your counseling with the boy

32. In a conference with the parents, discuss the career development process, and how the boy's personal adjustment may be causing him to reject college

CATEGORY FOUR: SITUATIONS DEALING WITH COUNSELOR-ADMINISTRATOR RELATIONSHIPS

Situation Eighteen

Because of state teacher certification practices, a teacher earns a life certificate after three years of successful experience. The principal appoints a counselor to the committee that each year reviews the status of beginning teachers, expecting the counselor to reveal any information or impressions he has about teachers.

If I were counselor, I would -

1. Tell each beginning teacher what your role was on the committee
2. Protest the appointment and begin looking for another position
3. Accept the appointment and give only positive information about teachers to the committee
4. Give the requested information to the committee, justifying your action on the basis of improved instruction for the school
5. Protest the method of determining who is successful and question your membership on the committee
6. Accept the responsibility as an important role for a counselor
7. Gladly accept the appointment and volunteer for similar assignments

Situation Twenty-Five

The principal has shown considerable interest in the results of the spring achievement testing program. He contacts you frequently, wondering when you will have the results ready. During his last call, he indicates that he wants them before next Friday when he must make his report about staff performance to the Superintendent of Schools.

If I were counselor, I would -

8. Ask for clerical assistance so that the job could be finished on time
9. Indicate that the final report will probably not be complete by Friday but that you could give him some of the trends by that time
10. Ask him if he had any particular teachers in mind and promise to have the results for them available by next Friday
11. Put everything else aside until you complete the job by the deadline
12. Tell him you simply don't have the time, such a job is more than a counselor can do if he is to carry on his other activities
13. Use this occasion to indicate the many functions which a counselor has to perform and how concentration upon one of the functions simply puts everything else in jeopardy
14. Tell him you'll try but don't kill yourself getting it done
15. Ask him if he will let you use the staff in his office to get the job done

Situation Twenty-Seven

The principal calls you to his office to announce that the pupil-counselor ratio must be increased from 1/350 to 1/500 for the next year. There is not sufficient money to hire another counselor so that, with increasing numbers of students, he can maintain the 1/350 ratio. He, furthermore, indicates that he feels that a counselor should be busy and that a ratio of 1/350 gives a counselor too much free time.

If I were counselor, I would -

16. Tell the principal that you will be looking for a new position if he feels that way about a counselor's work
17. Raise a question about what the principal expects you to do with such a high ratio--that is, what should be the priorities in your work, you can't do everything
18. Look for another counseling position but don't tell the principal until you locate one
19. Compile a list of your present activities and submit it as proof that a ratio of 1/350 is too high to perform your job in an acceptable manner
20. Protest the ratio for next year to a personal friend on the school board, particularly the principal's attitude toward counseling
21. The next time the principal wants a special favor, tell him you are too busy to get it done
22. Accept the decision regarding the ratio and ask for a full-time office clerk to help with the clerical chores

Situation Twenty-Eight

Whenever the principal leaves the building for any significant length of time, he asks the counselor to take over. This condition is complicated by a teacher who sends as many as twelve students per class period to the office for disciplinary reasons.

If I were counselor, I would -

23. Refuse to take charge as long as the teacher insisted upon sending so many students to the principal's office

24. Accept the assignment as good experience for a counselor who should understand a principal's problems anyway

25. Use these teacher referrals as a means to facilitate counseling contacts

26. Raise a question with the principal concerning the time which this assignment takes you away from your work

27. See the teacher and try to convince her that she is sending too many students to the principal's office

28. Send the students back to the teacher as quickly as she refers them to the principal's office

29. Set up a detention room for the students after school as a means of curbing their capers in the teacher's classroom

30. Use the experience as a means of preparing yourself for an administrative position some day

CATEGORY FIVE: SITUATIONS DEALING WITH COUNSELOR-COUNSELOR RELATIONSHIPS

Situation Twenty-One

A pupil with considerable ability and as normal as a youngster can be in this day and age has been to the counselor's office for a conference. It lasted more than thirty minutes. One of the other counselors questioned whether it was necessary to spend so much time with such a student when there were so many who needed a counselor's help so much more.

If I were counselor, I would -

1. Try to cut back on the time spent with each student
2. Question how a counselor can do anything of importance in less than thirty minutes
3. Interpret such a remark as coming from a counselor who lacks any real understanding of counseling
4. Pay no attention to such a comment
5. Bring the subject up during a counselor's meeting and ask for clarification
6. Ask the counselor to record his work on tape and to compare it with some of your recordings
7. Let the counselor know in no uncertain terms that you consider this a professional matter, one that each counselor decides for himself
8. Take the matter to the principal and let him decide who is correct

Situation Twenty-Two

Mr. Jame has been talking to a counselee of Mr. Robert about test results. It seems that Mr. Jame's interpretation of the tests was not the same as that of Mr. Robert. Mr. Robert also made some inferences about Mr. Jame as a counselor.

If I were Mr. Jame, I would -

9. Show the student why you think Mr. Robert is technically wrong in his interpretation
10. Confront Mr. Robert with his lack of professional behavior
11. Let the student decide which interpretation is correct
12. Bring the interpretation matter to a counselor's meeting and raise a question about the ethical principles involved
13. Bring Mr. Robert into your office along with the student and settle differences once and for all
14. Tell the student he had better work with Mr. Robert
15. Tell Mr. Robert to stay away from your counselees

Situation Twenty-Three

A fellow counselor is rather a verbal person, tending to talk too much about students and teachers in the faculty lounge, hallways, and outside the school. In other ways, he is a professional person and relates well to children, adolescents, and adults alike.

If I were counselor, I would -

16. Go to the principal and ask him to talk to the counselor
17. When the counselor is not in his office, place a copy of a code of ethics on his desk
18. Wait until the counselor is talking too much and raise the question of propriety
19. Confront the counselor with your feelings about his behavior
20. Ignore the matter
21. Discuss excessive talking by teachers at a counselors' meeting and hope the counselor gets the idea

Situation Twenty-Four

You are counseling with a boy who is a neighbor and friend of another counselor in the school. The boy originally came to you on the urgings of his parents who felt he needed some "special tests" to help him decide what occupation he should enter. After several interviews, you mutually decide that additional testing is not needed. You later learn that the other counselor at the urging of the boy's parents has scheduled him for a battery of tests which he has asked the boy to take and is planning to interpret to the boy and the parents.

If I were counselor, I would -

22. Contact the parents and question the wisdom of administering tests to the boy at this time
23. Call in the boy and indicate that you had nothing to do with the decision to give him some tests
24. Ask the other counselor why he "went over your head" in recommending further tests
25. Question the other counselor's ethical behavior at a meeting of all counselors
26. Ask the principal to arbitrate the differences of opinion about giving more tests
27. Tell the other counselor to go ahead and give the tests but that you intend to interpret them to the boy and to his parents
28. Ignore the episode altogether
29. Pay no attention to the other counselor's unethical behavior, hoping that it won't become a frequent pattern of behavior

CATEGORY SIX: SITUATIONS DEALING WITH COUNSELOR RELATIONSHIPS WITH OTHER PUPIL PERSONNEL WORKERS AND AGENCIES OUTSIDE THE SCHOOL

Situation Twenty-Nine

A counselor has worked with a couple of students from the same family who come to school without shoes on their feet. He contacted the welfare agency, but the social worker said it would take several weeks to investigate the family before the agency could pay for shoes.

If I were counselor, I would -

1. Buy shoes for the youngsters out of my own account
2. Ask for a conference with the head of the welfare agency and demand some kind of emergency action
3. Collect old shoes from students and start my own collection for such needy cases
4. Write a letter to the local newspaper, complaining about services from the welfare agency
5. Ask the principal to start a petty cash fund for such emergencies
6. Take your case to some of the civic groups, questioning the value of bureaucracies that cannot act in time of need
7. Forget the problem and charge it to experiences with social welfare agencies
8. Take the problem to the principal and see whether he can get some action from the welfare agency

Situation Thirty

An employer calls your office about a young lady who is graduating soon and whom he might employ as a secretary. He wants you to send him her I.Q. and other information from the records.

If I were counselor, I would -

9. Question the employer about his knowledge about the I.Q.
10. Find out if the girl is interested in the position in question and, if so, send whatever information the employer wants
11. Ask the employer to send you a written request for the information so you have an official request on file
12. Ask the girl to send the employer a vita to which you attach the I.Q. and other information from the records
13. Politely refuse to send any information
14. Ask the employer what it is he is looking for in a secretary and then send him whatever will help evaluate the girl
15. Explain that the school is not a placement bureau and that you cannot send the information because you lack clerical help
16. Agree to send the information but delay sending the information until the employer has made a decision about the girl

Situation Thirty-One

A local policeman appears and says, "One of your students has run off with a girl from another high school. We are trying to locate them before they get into serious trouble. If we could go through your records, we probably could find some clues which would help us locate them."

If I were counselor, I would -

17. Explain the predicament which this request places you in and suggest he look elsewhere for clues

18. Turn all records over to him without any argument

19. Ask him to go to the principal and bring you written permission to release the records

20. Select out of the files any information which might be helpful but do not give him all records

21. Recognize the serious nature of the problem and, using your contacts with students, help in any way you can to find some leads

22. Apologize for the poor records which schools generally keep, then go over the records yourself, and pass along any information of a positive nature

23. Tell him that school records are not public records, especially if newspapers are to have access to the information

Situation Thirty-Two

A secondary school counselor has been working with an elementary school principal who has been contemplating the hiring of a counselor for her elementary school. A school social worker already employed by the elementary school, however, feels instead that the principal should hire another social worker; or in the words of the social worker; "What can an elementary school counselor do with these problem children that a school social worker or even a school psychologist can't do better?"

If I were the secondary school counselor, I would -

24. Emphasize that there are plenty of children who need help, enough to occupy the time of several individuals with special skills

25. Collect data on several pupils that might profit from a counselor's assistance, onces that would not be referred to the school social worker, and show it to the principal

26. Suggest to the social worker that, if she performed her work satisfactorily, there would be no need for another school social worker

27. Accept the fact that the elementary school is probably not ready for an elementary school counselor as yet

28. Invite an authority on counseling to talk to the teachers, principal, school social worker, and nurse, at a staff meeting

29. Discuss the school social worker's narrow point of view and obvious bias against school counselors with the principal

30. Convince some of the teachers that the school needs a counselor, hoping they will put some pressure on the principal

31. Discuss the controversy with a school board member who is a personal friend

Situation Thirty-Three

A school psychologist in discussing a counselor's work with the administrator states that school psychologists have suggested that school counselors concentrate on working with students who are badly in need of help. While it would be nice to work with everyone, he says, "A counselor should concentrate on working with those students where it will do the most good."

If I were the counselor, I would -

32. Question whether the school psychologist isn't wasting his time with many students who at best will not change their behavior or achievement

33. Forget it and go about your business as if nothing had been said

34. Ask the school psychologist why he thought it necessary to put you in bad light with the administrator

35. Ask the administrator to bring the school psychologist to his office so you can defend your role

36. Take the school psychologist out to lunch for the purpose of discussing his conversation with the administrator

37. Look for another position, one where a counselor's role is appreciated and accepted

38. Tabulate the kinds of students with whom you have worked and give it to the principal with a copy going to the school psychologist

Situation Thirty-Four

A counselor, sensing that a girl has difficulty seeing across the room, calls her parents who take her to an eye specialist. When the girl eventually wears her glasses to school, the nurse shows some concern that she was not advised of the action taken by the counselor. She complains to the school physician that the counselor is now attempting to diagnose physical ailments and that the counselor does not refer students to the nurse before contacting parents; moreover she complains to the principal about the counselor's dishonesty with fellow staff members.

If I were counselor, I would -

39. Advise her that you are also a professional worker and have a right to contact parents about their children

40. Apologize for "going over her head" to the parents and promise not to do it again

41. Make a bargain with the nurse that you will refer students with physical symptoms to her if she refers counseling cases to you

42. Use this case as a way to get the school administrator to discourage the nurse from counseling students, as rumor has it, about their career plans

43. Call the shots the way you see them and forget about the nurse's defensive behavior

44. Don't let the nurse run over you once or she will do it repeatedly, figuring that anything having to do with physical needs is superior to any other needs

45. At the first opportunity, offer to counsel the nurse with respect to hypersensitivity about her work

46. Seek an apology for the way in which she has questioned your integrity

APPENDIX B

PRE-PRACTICUM MEANS AND STANDARD DEVIATIONS ON ALTERNATIVES OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY BY CATEGORIES FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

CATEGORY ONE: SITUATIONS DEALING WITH COUNSELOR-CLIENT RELATIONSHIPS

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
1.	4.21	.999	4.38	.807
2.	3.25	1.16	3.18	1.23
3.	1.97	.946	2.04	.911
4.	3.08	1.32	3.56	1.03
5.	1.95	.865	2.18	1.18
6.	2.93	1.23	2.72	1.13
7.	2.12	1.12	1.95	1.07
8.	2.31	1.02	1.89	.895
9.	4.62	.725	4.53	.533
10.	2.58	1.15	2.72	1.14
11.	2.54	1.15	2.58	1.13
12.	1.66	.897	1.75	.877
13.	3.91	.953	3.60	.906
14.	3.27	1.20	3.16	.897
15.	2.14	1.06	2.10	.895
16.	4.39	.859	4.18	.927
17.	2.08	1.13	2.22	.962
18.	1.70	.726	1.97	.901
19.	3.27	1.13	2.52	1.11
20.	3.79	.95	3.79	.99
21.	3.64	1.14	3.43	1.01
22.	4.79	.40	4.50	.81
23.	3.95	.93	3.93	.92
24.	2.75	1.10	2.83	1.23
25.	3.27	1.23	3.16	1.24
26.	4.06	.77	3.79	1.11
27.	4.27	.72	4.22	.87
28.	4.47	.76	4.20	.99
29.	2.91	1.23	2.54	1.20
30.	1.64	.87	1.54	.73
31.	4.25	.94	3.95	1.05
32.	2.00	.91	1.95	.97
33.	2.72	.88	2.58	.90
34.	2.29	.84	2.12	.85
35.	2.02	.92	2.14	.79
36.	3.85	.91	3.60	.99
37.	2.50	.97	3.08	1.05
38.	2.06	.71	2.22	.84
39.	1.79	.67	2.00	.73
40.	3.91	.83	3.77	1.06

CATEGORY ONE (Cont'd)

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
41.	2.54	.95	2.47	.91
42.	2.35	.90	2.41	.97
43.	2.08	.73	1.93	.85
44.	2.29	1.05	2.31	1.02
45.	1.89	.71	1.81	.69
46.	2.37	.75	2.20	.76
47.	2.10	.77	1.81	.72
48.	2.20	.93	2.22	.82
49.	3.79	1.05	3.89	1.12
50.	2.95	1.07	2.81	1.07
51.	2.10	.65	2.10	.82
52.	1.79	.76	1.83	.65
53.	3.14	1.02	2.66	.96
54.	4.37	.63	4.31	.54
55.	2.25	.82	2.52	.97
56.	1.62	.59	1.64	.62
57.	4.08	.83	3.81	.90
58.	3.62	.92	3.52	.88
59.	2.85	1.19	2.93	1.08
60.	2.75	1.08	2.75	1.16
61.	2.29	.81	2.56	1.01

CATEGORY TWO: SITUATIONS DEALING WITH COUNSELOR-TEACHER RELATIONSHIPS

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
1.	3.25	1.28	3.12	1.28
2.	3.41	.93	3.27	1.11
3.	2.64	1.07	2.52	1.04
4.	3.08	1.05	3.08	1.05
5.	3.70	.91	3.41	1.05
6.	3.66	.98	3.39	1.16
7.	3.77	.87	3.25	.96
8.	3.35	1.07	3.29	1.05
9.	3.52	.93	2.91	1.13
10.	4.14	.79	3.60	1.03
11.	2.56	.93	2.62	1.05
12.	2.29	1.25	2.35	1.10
13.	4.37	.72	4.12	.88
14.	4.08	.86	4.04	.81
15.	3.85	.84	3.56	1.07
16.	4.45	.64	4.37	.69
17.	2.75	1.08	2.45	1.13
18.	3.66	.92	3.37	.85
19.	4.10	.68	3.95	.86
20.	4.04	.70	4.14	.73
21.	2.91	1.07	2.91	.95
22.	3.20	1.15	3.25	1.12
23.	4.04	.86	4.22	.68
24.	4.64	.51	4.29	.78
25.	3.43	1.15	3.60	1.05
26.	3.60	.99	3.33	1.24
27.	3.97	.85	3.87	.90
28.	3.47	1.22	3.20	1.30
29.	2.87	1.18	2.89	1.22
30.	2.83	1.17	2.64	1.07
31.	2.58	.97	2.60	1.05
32.	4.41	.75	4.25	.80
33.	3.47	1.22	2.66	1.16
34.	4.18	1.03	3.81	1.14
35.	2.58	1.20	2.54	1.11
36.	3.52	.95	3.04	1.09
37.	3.18	1.01	3.16	1.21
38.	3.43	1.11	3.20	1.11
39.	3.89	1.19	3.64	1.31
40.	4.10	.89	4.22	.84
41.	1.70	.64	1.66	.68

CATEGORY THREE: SITUATIONS DEALING WITH COUNSELOR-PARENT RELATIONSHIPS

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
1.	3.70	1.13	3.64	.96
2.	3.25	1.21	3.00	1.20
3.	4.50	.76	4.31	.93
4.	1.89	.98	1.64	.77
5.	3.95	.88	3.56	1.17
6.	3.50	1.24	3.27	1.11
7.	3.27	1.27	3.39	1.13
8.	3.00	1.19	3.33	1.26
9.	3.87	1.09	3.52	1.17
10.	2.58	1.01	2.35	.87
11.	3.20	1.09	2.79	1.03
12.	3.20	1.05	3.12	1.14
13.	1.75	.59	1.87	.85
14.	2.54	.88	2.64	1.03
15.	3.20	.86	3.08	.99
16.	3.06	1.10	2.85	1.17
17.	2.75	1.18	2.45	1.20
18.	2.16	1.04	1.79	.67
19.	3.08	1.03	3.35	1.12
20.	2.64	1.08	2.14	.97
21.	3.16	1.17	2.97	1.12
22.	4.16	.65	3.70	1.01
23.	3.91	.88	3.45	1.13
24.	3.66	1.12	3.10	1.06
25.	2.22	1.10	2.62	1.09
26.	4.14	.61	3.95	.99
27.	2.18	.92	2.20	.84
28.	3.64	.96	3.54	.99
29.	2.87	1.01	2.70	1.07
30.	1.83	.89	1.91	.73
31.	2.81	1.14	3.00	.93
32.	1.93	.62	1.93	.98

CATEGORY FOUR: SITUATIONS DEALING WITH COUNSELOR-ADMINISTRATOR RELATIONSHIPS

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
1.	2.37	1.28	2.68	1.35
2.	3.75	.96	3.60	1.09
3.	3.77	.98	3.43	1.03
4.	2.93	1.23	2.89	1.02
5.	2.43	1.11	2.54	1.09
6.	3.35	1.10	3.43	1.09
7.	3.89	.91	4.00	.84
8.	2.27	.88	2.16	1.06
9.	2.50	.88	2.52	.99
10.	3.66	.96	3.56	1.05
11.	3.56	.83	3.37	1.07
12.	3.35	1.03	3.37	1.01
13.	2.89	.94	3.06	1.16
14.	3.56	.95	3.56	1.13
15.	2.85	.97	2.83	1.08
16.	3.66	1.02	3.56	.97
17.	2.22	.77	2.08	.83
18.	3.68	1.00	3.77	.89
19.	2.35	.90	2.33	1.14
20.	4.22	.71	4.29	.84
21.	4.14	.73	4.04	.93
22.	2.37	1.01	2.47	1.17
23.	3.62	.94	3.79	.91
24.	3.31	1.06	2.91	1.07
25.	2.72	.99	2.41	1.03
26.	2.14	.70	2.20	.78
27.	3.35	1.05	2.83	1.06
28.	3.97	.62	3.95	.67
29.	3.95	.76	3.89	.96
30.	3.68	.96	3.43	.99

CATEGORY FIVE: SITUATIONS DEALING WITH COUNSELOR-COUNSELOR RELATIONSHIPS

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
1.	4.08	.83	4.00	.91
2.	3.66	1.02	3.52	1.07
3.	3.02	1.16	2.97	1.23
4.	3.25	1.10	2.91	.99
5.	3.18	1.14	2.91	1.15
6.	4.29	.81	4.22	.84
7.	3.04	1.24	3.08	1.07
8.	4.47	.53	4.50	.61
9.	4.18	1.09	4.06	1.00
10.	2.97	1.16	2.79	1.11
11.	3.62	1.03	3.50	1.13
12.	2.41	.97	2.47	1.09
13.	4.18	.83	4.18	1.03
14.	3.54	1.01	3.79	1.01
15.	4.06	.74	4.12	.85
16.	3.70	1.07	3.66	1.02
17.	3.93	.77	3.64	1.01
18.	3.45	.97	3.10	1.06
19.	2.43	1.01	3.60	1.05
20.	3.93	.85	3.91	.75
21.	2.47	1.02	2.08	.90
22.	3.56	1.09	3.37	1.07
23.	3.33	1.00	3.22	1.00
24.	2.75	1.07	2.66	1.06
25.	3.95	.95	3.56	.95
26.	4.20	.64	3.83	.87
27.	4.18	.63	4.08	.64
28.	3.77	.84	3.56	1.01
29.	3.45	1.03	3.39	1.11

CATEGORY SIX: SITUATIONS DEALING WITH COUNSELOR RELATIONSHIPS WITH OTHER PUPIL PERSONNEL WORKERS AND AGENCIES OUTSIDE THE SCHOOL

	High Performance Rated		Low Performance Rated	
Item	Mean	SD	Mean	SD
1.	3.85	.88	3.50	.97
2.	2.77	1.00	2.37	.99
3.	3.45	1.05	3.10	1.06
4.	4.06	.82	4.20	.57
5.	2.50	1.04	2.50	1.08
6.	3.75	1.01	3.58	1.03
7.	4.27	.72	4.12	.80
8.	2.39	1.01	2.18	1.01
9.	3.31	1.06	3.00	1.08
10.	3.62	.94	3.60	1.03
11.	2.79	1.20	2.58	1.15
12.	3.62	.99	3.87	.88
13.	3.66	1.04	3.75	.98
14.	1.97	.85	2.10	1.04
15.	4.25	.66	4.14	.79
16.	4.33	.62	4.22	.58
17.	3.04	1.13	2.87	1.18
18.	4.50	.61	4.37	.59
19.	3.08	1.25	2.93	1.21
20.	2.50	1.15	2.27	1.07
21.	2.25	1.08	2.06	.96
22.	4.02	.82	3.77	1.04
23.	2.12	1.05	2.25	1.14
24.	1.70	.86	1.68	.54
25.	2.47	1.02	2.20	.93
26.	4.54	.64	4.45	.78
27.	4.27	.56	4.14	.57
28.	2.27	.92	2.00	.67
29.	3.85	.86	3.77	1.04
30.	3.79	.67	3.70	1.03
31.	4.08	.81	4.20	.88
32.	4.14	.73	3.97	.96
33.	3.75	.87	3.75	.96
34.	3.81	.90	3.83	.89
35.	3.45	1.03	3.37	.99
36.	3.58	.95	3.54	.97
37.	4.12	.63	3.93	.71
38.	2.85	1.13	2.50	1.08
39.	2.62	1.03	2.27	.88
40.	3.25	1.07	3.41	1.07

CATEGORY SIX (Cont'd)

	High Performance Rated		Low Performance Rated	
Item	**Mean**	**SD**	**Mean**	**SD**
41.	3.58	.99	3.54	1.13
42.	3.91	.78	4.02	.77
43.	3.33	.98	3.50	1.17
44.	3.89	.89	3.75	.96
45.	4.16	.84	4.14	.81
46.	4.25	.66	4.08	.86

APPENDIX C

MEANS AND STANDARD DEVIATIONS FOR HIGH, AVERAGE, AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES ON THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY, NDEA COMPREHENSIVE EXAMINATION, AND THE OHIO STATE UNIVERSITY PSYCHOLOGICAL EXAMINATION

MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

	High Rated		Average Rated		Low Rated	
Scale	Mean	SD	Mean	SD	Mean	SD
			Men			
L	47.42	5.05	46.96	6.71	48.26	6.77
F	50.28	4.97	49.17	3.71	49.32	2.43
K	62.67	10.01	63.13	7.61	61.42	7.05
Hs	53.94	5.86	54.13	7.11	53.21	9.31
D	49.89	7.31	49.26	7.16	50.74	7.32
Hy	57.72	7.47	59.78	4.66	60.11	4.90
Pd	55.33	8.24	59.83	7.92	57.05	8.38
Mf	62.39	12.75	65.13	8.30	65.63	12.13
Pa	54.00	6.99	54.26	7.98	56.58	7.27
Pt	57.33	10.13	59.09	13.56	55.05	10.61
Sc	55.83	10.31	56.57	5.74	55.16	11.05
Ma	56.17	10.78	57.83	8.94	56.42	9.26
Si	43.39	6.01	43.09	6.87	45.00	4.56
			Women			
L	49.23	6.26	50.20	7.68	48.76	7.10
F	48.40	3.07	49.60	4.47	51.93	5.13
K	61.70	7.91	59.90	9.04	59.90	8.85
Hs	51.17	6.16	50.30	7.05	50.59	8.06
D	47.43	4.92	48.95	8.46	47.55	8.50
Hy	56.27	5.64	57.02	6.12	56.83	7.98
Pd	56.23	7.38	56.95	8.47	57.24	9.38
Mf	48.13	9.57	44.17	9.43	45.59	12.76
Pa	51.80	6.03	55.70	8.93	55.00	9.18
Pt	49.20	4.02	52.72	6.36	53.83	9.91
Sc	52.33	4.85	54.42	9.58	56.72	9.27
Ma	53.63	11.16	58.72	9.47	56.59	9.09
Sc	46.40	5.26	46.88	8.73	48.10	9.01

NDEA COMPREHENSIVE EXAMINATION

	High Rated		Average Rated		Low Rated	
Scale	Mean	SD	Mean	SD	Mean	SD
			Men			
Total Score	87.61	13.85	88.22	15.94	84.58	14.49
			Women			
Total Score	90.57	15.50	91.35	14.71	82.90	14.56

OHIO STATE PSYCHOLOGICAL EXAMINATION

			Men			
Total Score	106.56	23.92	114.61	24.27	103.16	22.38
			Women			
Total Score	111.30	20.65	110.85	19.34	102.34	24.54

APPENDIX D

CODING INFORMATION ON VARIABLES FROM THE COUNSELOR QUESTIONNAIRE

Number	Variable	Code
1	Sex	1 - Male 2 - Female
2	Age	1 - 20-30 2 - 31-49 3 - 50+
3	Marital Status	1 - Single 2 - Married 3 - Divorced, Separated, Widowed
4	Father's Educational Level	1 - Less than high school 2 - High school graduate 3 - College graduate
5	Mother's Educational Level	1 - Less than high school 2 - High school graduate 3 - College graduate
6	Undergraduate Major	1 - Academic 2 - Non-academic 3 - No Response
7	Degree	1 - BA 2 - BS 3 - Other
8	Graduate Major	1 - Education 2 - Non-education
9	Guidance & Counseling Major	1 - Yes 2 - No
10	Teacher's Certificate	1 - Yes 2 - No
11	School Level Taught	1 - Elementary 2 - 7 - 12 3 - College (None)
12	Teaching Field	1 - Academic 2 - Non-academic 3 - No Response
13	Amount of exposure to psychology	1 - 0 courses 2 - 1-3 courses 3 - 4+ courses

Number	Variable	Code
14	Amount of exposure to sociology	1 - 0 courses 2 - 1-3 courses 3 - 4+ courses
15	Had Counseling Process	1 - Yes 2 - No
16	Occupational Information	1 - Yes 2 - No
17	Measurement of Aptitudes	1 - Yes 2 - No
18	Experience as a Teacher	1 - 0-2 years 2 - 3-5 years 3 - 6 + years
19	Work Experience	1 - 0-2 years 2 - 3-5 years 3 - 6 + years
20	Counseling Experience	1 - 0 years 2 - 1-3 years 3 - 4 + years

APPENDIX E

CODING INFORMATION FOR THE OHIO STATE UNIVERSITY PSYCHOLOGICAL EXAMINATION, THE NDEA COMPREHENSIVE EXAMINATION AND THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

OHIO STATE PSYCHOLOGICAL EXAMINATION

Number	Scale	Code
21	Total Score	1 - 90 Less 2 - 91-119 3 - 120 +

NDEA COMPREHENSIVE EXAMINATION

22	Total Score	1 - 76 Less 2 - 77-98 3 - 99 +

MINNESOTA MULTIPHASIC PERSONALITY INVENTORY

23	L Scale	1 - 43 Less 2 - 44-52 3 - 53 +
24	F Scale	1 - 46 Less 2 - 47-52 3 - 53 +
25	K Scale	1 - 55 Less 2 - 56-66 3 - 67 +
29	Pd Scale	1 - 50 Less 2 - 51-62 3 - 63 +
34	Ma Scale	1 - 49 Less 2 - 50-58 3 - 59 +
35	Si Scale	1 - 40 Less 2 - 41-48 3 - 49 +

APPENDIX F

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY AND PERSONAL CHARACTERISTICS SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

TABLE 1

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON ALTERNATIVES OF CATEGORY ONE OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR - CANDIDATES

Items and Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern					
	Initial Group[b]		Cross Validation Group[c]		Total	
	H[d]	L[e]	H	L	H	L
1:3	4	0	1	1	5	1
2:1	3	5	0	2	3	7
2:3	5	5	3	3	8	8
3:3	3	5	4	3	7	8
4:1	4	4	3	4	7	8
5:1	3	4	0	4	3	8
5:3	2	5	2	0	4	5
8:3	4	6	5	5	9	11
11:3	5	5	2	2	7	7
12:3	7	5	2	1	9	6
13:3	2	6	1	2	3	8
17:3	4	7	4	1	8	8
19:3	3	11	3	5	6	16
21:3	5	7	0	1	5	8
29:1	4	0	1	2	5	2
29:3	1	6	1	2	2	8
33:3	2	9	6	1	8	10
35:3	5	10	7	5	12	15
36:3	5	1	0	3	5	3
37:1	2	5	1	4	3	9
37:3	2	4	2	1	4	5
38:3	3	4	6	1	9	5
43:3	6	5	3	1	9	6
44:3	4	5	3	5	7	10
46:3	3	7	2	2	5	9
50:1	2	5	5	2	7	7
50:3	4	4	3	0	7	4
53:3	4	8	5	3	9	11
58:3	4	4	1	1	5	5
60:1	0	5	1	0	1	5
60:3	4	4	3	3	7	7
61:1	2	5	0	3	2	8

TABLE 1--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	29-1:24-2	4	0	1	0	5	0
2.	8-2:33-2	23	14	7	11	30	25
3.	29-1:54-2	4	0	1	2	5	2
4.	1-3:15-2	4	0	1	1	5	1
5.	5-2:19-2	22	9	9	11	31	20
6.	29-1:26-2	4	0	1	2	5	2
7.	22-2: 1-3	4	0	1	1	5	1
8.	16-2:29-1	4	0	1	2	5	2
9.	34-2:19-2	24	12	9	10	33	22
10.	59-2:13-3:15-2	26	18	13	11	39	29
11.	52-2:33-2:48-2	25	16	10	15	35	31
12.	19-2:52-2:49-2	21	12	8	12	29	24
13.	35-2:60-2:28-2	22	13	7	11	29	24
14.	34-2: 5-2:14-2	20	12	11	8	31	20
15.	49-2:19-2:10-2	19	8	16	13	35	21
16.	19-2:31-2: 5-2	20	9	8	9	28	18
17.	38-2:47-2:13-2	23	15	10	14	33	29
18.	41-2:13-2:54-2	26	18	16	12	42	30
19.	26-2: 8-2:19-2	20	10	5	8	25	18
20.	2-2:37-2:61-2	17	9	12	7	29	16
21.	18-2:59-2:60-2	23	15	12	12	35	27
22.	53-2: 8-2:52-2	22	14	8	10	30	24
23.	61-2:34-2:46-2	22	14	13	10	35	24
24.	13-2:37-2:39-2	21	13	12	10	33	23
25.	10-5: 2-3	1	5	2	0	3	5
26.	29-2:19-3	2	10	3	4	5	14

TABLE 1--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
27.	54-2:13-3	1	6	1	2	2	8
28.	4-2: 5-3	1	5	1	0	2	5
29.	13-3:39-2:10-2	1	6	1	1	2	7
30.	36-2:25-2:56-2	16	23	14	10	30	33
31.	55-2:51-2: 1-2	19	25	15	15	34	40

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

TABLE 2

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON ALTERNATIVES OF CATEGORY TWO OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Items and Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern					
	Initial Group[b]		Cross Validation Group[c]		Total	
	H	L	H	L	H	L
1:3	2	5	2	2	4	7
2:3	0	3	0	2	0	5
4:1	4	5	2	2	6	7
6:3	2	4	2	1	4	5
9:3	2	6	1	2	3	8
10:1	1	4	2	1	3	5
11:3	1	4	1	3	2	7
14:3	1	4	0	2	1	6
15:1	1	4	2	1	3	5
17:3	3	9	4	2	7	11
18:3	4	3	2	2	6	5
19:3	3	0	0	2	3	2
21:1	1	5	1	1	2	6
21:3	3	5	2	1	5	6
22:3	2	5	3	4	5	9
24:1	0	3	0	0	0	3
29:1	5	6	2	5	7	11
29:3	2	4	2	2	4	6
30:3	4	4	3	3	7	7
31:3	3	4	3	1	6	5
33:1	8	6	4	0	12	6
33:3	0	5	4	4	4	9
35:1	3	6	3	2	6	8
35:3	1	5	1	3	2	8
36:3	2	6	1	1	3	7
37:3	5	4	2	2	7	6
38:1	3	0	0	0	3	0
38:3	3	8	3	2	6	10
39:3	4	4	2	4	6	8

TABLE 2--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	17-2:34-2	23	15	10	10	33	25
2.	35-2:36-2	24	16	9	10	33	26
3.	11-2:35-2	25	14	13	9	38	23
4.	35-2:15-2	25	16	13	11	38	27
5.	29-2:17-2	19	11	10	9	29	20
6.	35-2:29-2	20	12	11	7	31	19
7.	35-2:38-2	22	14	12	13	34	27
8.	35-2: 2-2	26	15	14	10	40	25
9.	37-2:35-2	23	13	10	12	33	25
10.	24-2:35-2	26	17	14	13	40	30
11.	35-2:9-2	23	13	13	11	36	24
12.	2-2: 1-2	28	20	16	13	44	33
13.	35-2: 1-2	24	16	12	12	36	28
14.	9-2: 1-2	26	17	16	14	42	31
15.	37-2:35-2:32-2	23	12	10	11	33	23
16.	14-2: 5-2:17-2	20	12	7	9	27	21
17.	37-2:35-2:14-2	21	10	10	10	31	20
18.	36-2: 2-2:35-2	24	12	9	8	33	20
19.	2-2:36-2:21-2	21	12	11	10	32	22
20.	35-2:36-2:23-2	24	13	8	10	32	23
21.	29-2:35-2:10-2	18	9	9	5	27	14
22.	15-2:35-2: 4-2	21	10	11	10	32	20
23.	21-2:19-2:35-2	20	10	11	11	31	21
24.	35-2:36-2:34-2	23	13	8	7	31	20
25.	16-2:17-2: 9-2	22	13	11	11	33	24
26.	24-2:17-2:10-2	22	14	10	10	32	24
27.	22-2: 9-2:35-2	19	10	11	8	30	18
28.	37-2:35-2:11-2	22	9	9	9	31	18
29.	11-2: 2-2:36-2	25	14	12	8	37	22
30.	14-2:27-2:17-2	22	12	11	10	33	22
31.	17-2: 2-2: 9-2	22	12	11	9	33	21
32.	29-2: 9-2:35-2	18	8	10	7	28	15
33.	9-2: 1-2:21-2	22	11	13	13	35	24
34.	36-2:10-2: 9-2	20	12	11	9	31	21
35.	25-2:11-2:36-2	22	14	10	9	32	23
36.	35-2: 1-2:37-2	21	11	9	11	30	22
37.	29-2:21-2: 2-2	19	11	12	9	31	20
38.	9-2:35-2:41-2	23	13	12	9	35	22

TABLE 2--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
39.	9-3:25-2	2	6	1	2	3	8
40.	34-3: 1-2	0	4	2	3	2	7
41.	4-2:35-1	1	6	3	2	4	8
42.	2-2:35-3	1	5	1	3	2	8
43.	27-2:34-3	0	4	2	3	2	7
44.	38-2: 9-3	0	5	0	2	0	7
45.	33-3:11-2	0	4	4	4	4	8
46.	36-3: 2-2	2	6	1	0	3	6
47.	18-2:33-3	0	4	3	3	3	7
48.	29-2:33-3	0	5	3	3	3	8
49.	33-3:20-2	0	4	4	2	4	6
50.	3-2:17-3	2	7	4	2	6	9
51.	12-2:33-3	0	4	4	4	4	8
52.	33-3: 9-2	0	4	4	4	4	8
53.	27-2:17-3	2	8	4	2	6	10
54.	35-3:19-2	0	4	1	2	1	6
55.	29-2:17-3	2	7	3	1	5	8
56.	33-3:32-2	0	4	4	4	4	8
57.	5-2:33-3	0	4	3	3	3	7
58.	4-2:33-3	0	5	3	2	3	7
59.	2-2:17-3	3	8	4	2	7	10
60.	5-2:17-3	2	8	4	2	6	10
61.	18-2:17-3	2	8	3	1	5	9
62.	39-2:17-3:12-2	1	6	2	0	3	6
63.	3-2:29-2:17-3	1	7	3	1	4	8

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

TABLE 3

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON ALTERNATIVES OF CATEGORY THREE OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Items and Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern					
	Initial Group[b]		Cross Validation Group[c]		Total	
	H[d]	L[e]	H	L	H	L
1:1	5	4	0	2	5	6
2:1	6	4	1	0	7	4
2:3	6	6	1	4	7	10
4:1	4	1	0	1	4	2
5:3	2	4	1	4	3	8
6:3	3	6	3	2	6	8
7:3	6	6	1	3	7	9
8:3	6	5	2	3	8	8
9:1	0	3	0	1	0	4
9:3	2	4	3	2	5	6
10:3	2	9	5	2	7	11
11:3	3	7	2	5	5	12
14:3	4	6	2	3	6	9
15:1	2	5	1	1	3	6
16:3	4	9	2	3	6	12
17:3	15	8	5	7	20	15
18:1	4	0	1	0	5	0
18:3	1	8	0	2	1	10
19:1	3	4	0	1	3	5
20:3	3	8	2	5	5	13
21:3	9	5	4	3	13	8
24:3	4	10	3	1	7	11
26:1	4	2	1	1	5	3
27:3	3	8	7	3	10	11
28:1	2	4	2	3	4	7
28:3	4	4	0	2	4	6
29:1	4	2	1	1	5	3
29:3	12	2	1	3	13	5
31:3	5	6	2	2	7	8

TABLE 3--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	10-2:14-2	24	16	12	13	36	29
2.	5-2:19-3	4	0	1	1	5	1
3.	29-3:30-2	9	2	1	3	10	5
4.	29-1:19-2	4	0	1	0	5	0
5.	2-1:32-2	6	2	1	0	7	2
6.	24-2:21-3	7	3	2	3	9	6
7.	27-2: 6-2	24	16	8	12	32	28
8.	29-3: 3-2	9	1	1	2	10	3
9.	9-2: 2-1	6	2	0	0	6	2
10.	5-2:10-2	25	16	12	11	37	27
11.	24-2: 2-1	6	2	1	0	7	2
12.	16-2:14-2	21	13	14	12	35	25
13.	10-2: 6-2	25	14	11	14	36	28
14.	5-2: 9-2	26	18	14	11	40	29
15.	32-2: 9-2: 5-2	24	15	12	8	36	23
16.	27-2:32-2: 6-2	22	13	7	9	29	22
17.	29-3:12-2: 1-2	8	1	1	2	9	3
18.	23-2:29-3: 3-2	9	1	1	2	10	3
19.	29-3:23-2: 4-2	10	2	1	2	11	4
20.	9-2: 5-2: 21-3	9	4	2	1	11	5
21.	28-2:10-2: 9-2	21	13	10	11	31	24
22.	15-2:32-2: 5-2	22	14	14	7	36	21
23.	29-1:19-2:10-2	4	0	1	0	5	0
24.	9-2:21-3:13-2	8	4	2	2	10	6
25.	9-2:17-3:10-2	12	4	3	5	15	9
26.	9-2:17-3:14-2	12	3	2	4	14	7
27.	6-2: 5-2:10-2	22	12	10	10	32	22
28.	25-2:27-2: 9-2	21	12	9	11	30	23
29.	9-2:17-3:16-2	12	4	3	5	15	9
30.	6-2:28-2: 2-1	6	1	0	0	6	1
31.	25-2:17-3:24-2	12	4	4	5	16	9
32.	16-2: 9-2:18-2	20	9	12	13	32	22
33.	25-2:20-2: 2-2	6	0	1	0	7	0
34.	2-1: 6-2: 9-2	6	2	0	0	6	2
35.	25-2: 6-2: 10-2	22	11	11	12	33	23
36.	10-2:11-2: 6-2	22	11	10	9	32	20
37.	16-2:15-2:13-2	20	12	16	9	36	21
38.	10-2: 5-2:16-2	20	11	11	10	31	21
39.	6-2:27-2:16-2	18	9	7	11	25	20

TABLE 3--Continued

Pattern No.	Items & Nature of Change	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L	H	L	H	L
40.	1-2:18-3	1	8	0	2	1	10
41	27-3: 9-2	3	8	6	3	9	11
42.	18-3:32-2	0	6	0	0	0	6
43.	14-2:29-2	11	20	13	12	24	32
44.	6-3:29-2	0	6	3	1	3	7
45.	27-3:21-2	0	5	2	1	3	6
47.	18-3: 7-2	0	6	0	2	0	8
48.	25-2:10-3	1	7	5	2	6	9
49.	26-2:18-3	0	7	0	1	0	8
50.	23-2:29-2	11	23	14	14	25	37
51.	10-3:18-2	1	6	4	1	5	7
52.	3-2:11-3	3	7	2	4	5	11
53.	11-3: 4-2	2	7	2	5	4	12
54.	25-2:18-3	0	7	0	2	0	9
55.	4-2:16-3	3	7	2	2	5	9
56.	13-2:29-2	14	24	16	10	30	34
57.	29-2:11-3	1	6	1	3	2	9
58.	20-2:24-3	2	6	3	0	5	6
59.	18-3: 8-2	0	5	0	2	0	7
60.	25-2:11-3	2	7	2	3	4	10
61.	7-2:16-3	2	8	2	2	4	10
62.	4-2:29-2	12	22	15	14	27	36
63.	29-2:10-3	0	8	5	1	5	9
64.	29-2: 7-2	12	20	15	8	27	28
65.	21-2:29-2	10	19	12	11	22	30
66.	6-3:26-2	2	6	2	2	4	8
67.	29-2:30-2	12	24	16	13	28	37
68.	4-2:10-3:5-2	2	8	5	0	7	8
69.	29-2:30-2:15-2	10	18	15	11	25	29
70.	18-2:27-2:16-3	1	8	1	1	2	9
71.	27-2: 6-3:29-2	0	4	3	0	3	4
72.	25-2: 2-2:11-3	1	6	2	3	3	9
73.	23-3:32-2:18-3	0	6	0	0	0	6
74.	11-3:13-2:17-2	0	5	1	2	1	7
75.	24-3: 8-2:20-2	2	6	3	0	5	6
76.	12-2:14-2:29-2	9	18	11	11	20	29
77.	32-2:29-2:31-2						
78.	18-3: 1-2:25-2	0	7	0	2	0	9
79.	32-2:18-3: 2-2	0	6	0	0	0	6

TABLE 3--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the Pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
80.	29-2:17-2: 4-2	6	14	11	9	17	23
81.	32-2:18-3:29-2	0	5	0	0	0	5
82.	18-3: 1-2:32-2	0	6	0	0	0	6
83.	14-2:20-2:10-3	0	4	2	0	2	4
84.	29-2: 5-2:23-2	11	20	13	10	24	30
85.	7-2:11-3:4-2	1	7	1	4	2	11
86.	12-2: 6-3:29-2	0	5	3	1	3	6
87.	29-2:30-2:14-2	10	19	13	12	23	31
88.	6-3:25-2:29-2	0	6	3	1	3	7
89.	31-2: 1-2:17-2	8	15	8	9	16	24
90.	29-2:30-2:13-2	12	24	16	10	28	34
91.	19-2:29-2:14-2	9	18	12	10	21	28
92.	29-2:21-2: 3-2	10	19	12	11	22	30
93.	3-2:23-2:29-2	11	13	14	14	25	37

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

TABLE 4

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON ALTERNATIVES OF CATEGORY FOUR OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Items and Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern					
	Initial Group[b]		Cross Validation Group[c]		Total	
	H[d]	L[e]	H	L	H	L
1:1	2	5	2	4	4	9
2:1	6	4	4	3	10	7
3:1	6	1	1	1	7	2
4:1	3	1	1	1	4	2
4:3	4	7	5	2	9	9
5:1	3	4	2	1	5	5
5:3	4	5	0	0	4	5
6:3	8	2	2	2	10	4
7:3	4	1	2	0	6	1
9:1	3	6	0	1	3	7
9:3	0	3	1	1	1	4
10:1	4	4	1	0	5	4
10:3	0	4	2	1	2	5
11:3	2	4	0	1	2	5
12:1	1	5	1	0	2	5
13:1	3	4	3	1	6	5
13:3	3	4	4	4	7	8
14:3	4	6	2	2	6	8
15:3	2	6	1	1	3	7
16:1	5	5	3	3	8	8
19:1	1	4	2	1	3	5
19:3	1	3	2	2	3	5
21:1	4	1	0	0	4	1
23:1	5	2	1	1	6	3
24:3	2	4	1	5	3	9
27:3	2	5	2	3	4	8
30:3	3	5	0	4	3	9

TABLE 4--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	21-1:9-2	4	0	0	0	4	0
2.	7-3:30-2	3	1	2	0	5	1
3.	19-2: 9-2	26	17	13	13	39	30
4.	9-2:13-2	22	15	10	12	32	27
5.	26-2:10-2	24	17	15	17	39	34
6.	9-2: 8-2	24	16	13	14	37	30
7.	11-2: 2-1	4	2	4	2	8	4
8.	16-2: 6-3: 1-2	6	1	1	1	7	2
9.	6-3:26-2: 8-2	6	0	1	2	7	2
10.	9-2: 6-3:26-2	6	1	2	2	8	3
11.	23-1:20-2:21-1	3	0	0	0	3	0
12.	26-2: 9-2:11-2	22	13	17	14	39	27
13.	18-2: 9-2:26-2	23	15	14	14	37	29
14.	8-2: 9-2: 1-2	21	12	11	10	32	22
15.	19-2:11-2:14-2	20	11	11	11	31	22
16.	1-2:26-2: 9-2	22	11	12	11	34	22
17.	8-2:10-2:24-2	22	13	14	9	36	22
18.	19-2: 9-2:20-2	26	17	13	13	39	30
19.	26-2: 2-2:10-2	22	14	10	14	32	28
20.	2-2:10-2: 8-2	22	12	9	12	31	24
21.	12-1:17-2	1	4	1	0	2	4
22.	21-2:20-2	25	29	18	16	43	45
23.	14-3: 6-2	2	6	2	1	4	7
24.	17-2:14-3: 8-2	2	5	1	2	3	7
25.	28-2: 5-2:15-3	1	5	1	1	2	6
26.	1-1:29-2:25-2	0	4	1	3	1	7
27.	16-2:24-2: 4-3	1	4	4	0	5	4
28.	28-2:12-1: 2-2	1	4	1	0	2	4
29.	1-2:30-3:23-2	1	4	0	2	1	6
30.	1-2:30-3: 7-2	1	4	0	2	1	6

TABLE 4--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
31.	14-3:30-3: 7-2	0	3	0	0	0	3
32.	4-3:8-2 :23-2	1	4	3	2	4	6
33.	23-2: 1-2:19-1	0	3	0	0	0	3
34.	11-2: 6-2:14-3	2	6	2	1	4	7

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

TABLE 5

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON ALTERNATIVES OF CATEGORY FIVE OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Items and Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern					
	Initial Group[b]		Cross Validation Group[c]		Total	
	H[d]	L[e]	H	L	H	L
2:1	3	4	2	1	5	5
3:1	8	4	1	3	9	7
4:1	4	2	2	1	6	3
5:1	4	6	1	3	5	9
5:3	0	4	1	2	1	6
7:1	4	4	1	1	5	5
7:3	4	3	1	3	5	6
9:1	6	4	2	2	8	6
10:3	5	3	1	4	6	7
11:1	3	4	2	4	5	8
12:3	4	2	2	2	6	4
14:1	4	3	3	1	7	4
16:3	4	3	4	1	8	4
17:1	4	2	2	0	6	2
18:1	4	2	2	5	6	7
18:3	2	6	1	1	3	7
19:1	4	4	1	1	5	5
21:1	5	4	0	1	5	5
21:3	2	4	3	1	5	5
23:1	3	5	3	0	6	5
24:3	2	5	2	4	4	9
25:1	5	4	1	2	6	6
28:1	2	4	0	2	2	6
29:1	1	5	4	0	5	5
29:3	3	5	3	0	6	5
22:3	1	3	5	5	6	8

TABLE 5--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	6-3: 9-2	2	0	0	0	2	0
2.	8-2: 9-1	6	3	2	2	8	5
3.	6-2: 9-1	6	3	2	2	8	5
4.	7-3:14-2	4	1	0	2	4	3
5.	29-2:23-2	24	12	8	17	32	29
6.	9-1:25-2	6	2	2	1	8	3
7.	25-2:29-2	23	15	10	15	33	30
8.	5-2:23-2	23	13	12	12	35	25
9.	24-2:23-2	22	14	11	13	33	27
10.	22-2: 6-3:20-2	3	0	0	0	3	0
11.	29-2:25-2:26-2	22	13	10	12	32	25
12.	2-2:20-2:29-2	21	12	7	14	28	26
13.	8-2: 5-2:18-2	20	10	13	9	33	18
14.	23-2:24-2: 2-2	20	10	7	11	27	21
15.	29-2:23-2:13-2	24	12	7	15	31	27
16.	23-2: 5-2:19-2	21	12	11	10	32	22
17.	27-2: 5-2:18-2	20	11	13	9	33	20
18.	22-2: 5-2: 2-2	20	12	8	9	28	21
19.	17-2:23-2: 5-2	22	13	11	12	33	25
20.	5-3:17-2	0	4	1	2	1	6
21.	16-2:11-1	2	4	1	4	3	8
22.	10-1: 2-2	1	3	1	2	2	5
23.	16-2:25-3	0	2	0	1	0	3
24.	29-3: 4-3	0	2	0	0	0	2
25.	23-1:22-2	2	5	2	0	4	5
26.	3-2:29-3	2	5	3	0	5	5
27.	7-2:22-3	0	3	5	5	5	8
28.	22-3:21-2	0	3	5	5	5	8
29.	12-2:23-1	2	5	1	0	3	5
30.	7-2:29-3	2	5	2	0	4	5
31.	15-2: 9-3	0	4	1	1	1	5

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

TABLE 6

SINGLES, DOUBLES, AND TRIPLES OF RESPONSE CHANGES ON ALTERNATIVES OF CATEGORY SIX OF THE COUNSELOR SITUATIONAL ANALYSIS INVENTORY SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Items and Nature of Changes[a]	Number of Counselor-Candidates exhibiting the pattern					
	Initial Group[b]		Cross Validation Group[c]		Total	
	H[d]	L[e]	H	L	H	L
2:1	4	1	1	1	5	2
2:3	1	5	3	1	4	6
3:1	0	4	0	2	0	6
3:3	2	4	0	2	2	6
4:1	2	6	0	1	2	7
8:3	2	5	0	1	2	6
9:3	6	4	1	4	7	8
10:3	8	4	1	3	9	7
11:1	4	6	2	1	6	7
11:3	3	4	1	4	4	8
12:1	0	8	1	1	1	9
12:3	6	0	1	2	7	2
14:3	3	5	5	4	8	9
17:1	5	2	1	2	6	4
17:3	4	7	3	1	7	8
19:3	2	4	3	3	5	7
21:3	4	6	5	1	9	7
22:3	2	5	3	3	5	8
23:3	3	6	7	3	10	9
25:3	2	5	2	5	4	10
33:1	3	5	0	2	3	7
35:3	5	2	3	0	8	2
37:1	5	4	0	2	5	6
38:3	4	3	3	1	7	4
39:1	4	3	4	1	8	4
39:3	4	5	1	3	5	8
41:1	6	2	1	1	7	3
43:1	4	6	1	2	5	8
44:1	7	1	0	1	7	2
44:3	5	1	1	1	6	2

TABLE 6--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	12-3:14-2	5	0	0	2	5	2
2.	28-2: 8-1	3	1	2	1	5	2
3.	23-2:44-1	6	1	0	0	6	1
4.	27-2:44-1	7	1	0	1	7	2
5.	6-2:44-1	6	1	0	0	6	1
6.	12-2:44-1	6	1	0	1	6	2
7.	24-3:35-2:39-1	4	2	3	0	7	2
8.	7-2:18-2: 2-1	4	1	1	1	5	2
9.	30-2:44-1:42-2	4	0	0	1	4	1
10.	13-2:31-3:43-2	20	12	13	9	33	21
11.	18-2:44-1:35-2	5	1	0	1	5	2
12.	3-2:42-2:25-2	22	14	16	8	38	22
13.	11-2:15-2:44-1	7	1	0	0	7	1
14.	44-1:43-2:16-2	5	1	0	0	5	1
15.	44-1: 6-2:10-2	4	0	0	0	4	0
16.	44-1:20-2:11-2	7	1	0	0	7	1
17.	4-2:44-1- 6-2	6	1	0	0	6	1
18.	27-2:16-2:44-1	7	1	0	1	7	2
19.	44-1:23-2: 4-2	6	1	0	0	6	1
20.	44-1:20-2:18-2	7	1	0	0	7	1
21.	1-2:42-2:44-1	6	0	0	1	6	1
22.	44-1:31-2:16-2	7	1	0	1	7	2
23.	44-1:25-2:18-2	6	1	0	0	6	1
24.	31-2: 8-2:44-1	6	1	0	0	6	1
25.	20-2:46-2:44-1	6	1	0	0	6	1
26.	16-2:44-2	18	26	17	16	35	42
27.	39-2:12-1	0	6	1	1	1	7
28.	42-2:12-1	0	6	1	1	1	7
29.	43-2:12-1	0	6	1	1	1	7
30.	38-2:12-1	0	7	1	1	1	8
31.	12-1:15-2	0	6	1	1	1	7
32.	23-2:12-1	0	6	1	1	1	7
33.	6-2:12-1	0	7	1	1	1	8
34.	29-2:44-2	17	26	15	14	32	40
35.	44-2:26-2	17	26	16	15	33	41
36.	12-1:43-2	0	6	1	1	1	7
37.	16-2:21-2:22-3	1	5	3	2	4	7
38.	25-3:16-2:44-2	1	4	2	4	3	8

TABLE 6--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
39.	11-1:29-2: 7-2	3	6	1	0	4	6
40.	16-2:25-2:17-3	3	6	3	1	6	7
41.	12-1:23-2:46-2	0	5	1	2	1	7
42.	33-2:17-3:29-2	1	6	2	1	3	7
43.	9-2:41-2:36-2	12	22	12	11	24	33
44.	17-3:18-2:28-2	1	6	2	0	3	6
45.	33-2:12-1:42-2	0	6	1	1	1	7
46.	41-2:44-2:46-2	15	26	14	12	29	38
47.	43-2:44-2:12-1	0	6	1	1	1	7
48.	12-1:20-2:38-2	0	6	1	1	1	7
49.	12-1:41-2:46-2	0	6	1	0	1	6
50.	37-2:24-2:12-1	0	6	1	1	1	7
51.	38-2:41-2:35-2	12	20	9	13	21	33
52.	41-2:35-2:34-2	11	21	10	13	21	34
53.	12-1: 4-2:35-2	0	6	1	1	1	7
54.	36-2:12-1:42-2	0	6	1	1	1	7
55.	12-1:45-2:46-2	0	6	1	0	1	6
56.	45-2:12-1:35-2	0	6	1	1	1	7
57.	44-2:46-2:24-2	17	26	15	12	32	38
58.	9-2:29-2:36-2	14	22	11	9	25	31
59.	36-2:30-2:41-2	14	24	13	14	27	38

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

TABLE 7

DOUBLES AND TRIPLES ON PERSONAL CHARACTERISTICS SUBMITTED TO CROSS-VALIDATION FOR HIGH AND LOW PERFORMANCE RATED COUNSELOR-CANDIDATES

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
1.	4-3:12-1	7	2	5	1	12	3
2.	9-1:11-2	19	5	8	9	27	14
3.	23-2: 9-1	16	6	9	4	25	10
4.	9-1:10-1	26	16	15	14	41	30
5.	12-1: 9-1	20	6	12	8	32	14
6.	9-1:24-2	16	7	7	6	23	13
7.	2-1: 3-2	9	2	3	3	12	5
8.	9-1:15-1	28	17	14	16	42	33
9.	19-1:20-2	6	1	0	1	6	2
10.	9-1:12-1: 1-1	10	1	3	4	13	5
11.	8-1: 3-2: 9-1	17	7	10	9	27	16
12.	5-1: 3-2:16-1	8	3	3	5	11	8
13.	9-1: 6-1:35-2	13	4	7	10	20	14
14.	8-1:12-1: 9-1	20	6	12	8	32	14
15.	16-1: 9-1:23-2	15	4	4	2	19	6
16.	8-1:11-2: 9-1	19	5	8	9	27	14
17.	11-2: 9-1:10-1	19	5	8	9	27	14
18.	9-1:10-1:17-1	25	14	13	11	38	25
19.	8-1: 9-1:10-1	26	16	15	14	41	30
20.	8-1: 9-1:12-1	20	6	12	8	32	14
21.	9-1:10-1:12-1	19	6	11	8	30	14
22.	25-2:23-3	2	6	1	6	3	12
23.	19-3: 9-2	0	4	1	0	1	4
24.	21-3:19-3	0	7	3	0	3	7
25.	10-1: 9-2	2	8	2	1	4	9
26.	9-2:24-2	0	6	1	0	1	6
27.	2-2:12-2	2	8	2	1	4	9
28.	9-2: 8-1	2	9	2	1	4	10
29.	29-3:22-2	2	7	1	3	3	10
30.	15-1: 9-2	2	8	2	1	4	9
31.	9-2:25-2	1	6	0	1	1	7
32.	9-2: 3-2	1	6	2	1	3	7
33.	1-2:24-3	1	10	2	6	3	16
34.	29-3:19-1	1	6	0	3	1	9
35.	23-1:24-3	0	5	1	3	1	8

TABLE 7--Continued

Pattern No.	Items & Nature of Change[a]	Number of Counselor-Candidates exhibiting the pattern.					
		Initial Group[b]		Cross Validation Group[c]		Total	
		H[d]	L[e]	H	L	H	L
36.	24-3:35-1	1	5	2	2	3	7
37.	24-3:34-1	1	4	0	1	1	5
38.	29-3:35-1	0	2	0	1	0	3
39.	9-1:15-2	0	4	2	1	2	5
40.	9-2:15-1	2	8	2	1	4	9
41.	9-2:16-1	0	7	2	1	2	8
42.	9-2:17-1	0	6	1	1	1	7
43	15-2:16-1:17-1	0	5	0	1	0	6
44.	9-1:10-1:11-1	6	11	6	5	12	16
45.	18-2:19-1:20-1	1	5	2	2	3	7

[a] 1 indicates change from disagree to agree, 2 indicates no change, 3 indicates change from agree to disagree.

[b] Number of counselor-candidates in high and low rated groups = 30.

[c] Number of counselor-candidates in high and low rated groups = 18.

[d] = High Performance

[e] = Low Performance

APPENDIX G

PROGRAM TO ANALYZE QUALITATIVE DATA FOR TWO GROUPS

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PROGRAM TO ANALYZE QUALITATIVE DATA FOR TWO GROUPS

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This computer program randomly selects combinations of characteristics, and determines the extent to which each is present within 2 groups of individuals. It is assumed that the possible number of combinations is large. The goal is to identify those which are better discriminators between the groups.[1]

The program is designed for use in classification problems in which the majority of measurements are qualitative rather than continuous. For instance, ratings and diagnoses applied to individuals may represent qualitative data. When data are qualitative each measurement takes only a finite and usually small number of distinct values or states (limited to 2 or 3 in the program). No assumption is made concerning the form of distribution or intercorrelations of measurements.

The program may be described also as a hypothesis generator. Both the computer and the investigator are able to identify and examine a number of combinations. While the random approach of the computer will result in many poor hypotheses being checked, the computer with its great speed can examine a very large number. Study of better discriminators reported as output data could suggest factors for use in experimental studies or more intensive exploration of certain combinations using additional samples.

Examples of the kinds of problems to which the program could be applied include studies of characteristics of students who drop out of school and students who are graduated; children assigned to special classes and children assigned to regular classes; youth who exhibit delinquent behavior and youth who do not; persons with disease x and persons without disease x. The program may be employed in problems involving more than 2 groups if groups are considered in pairs.

Group 1 and group 2 are each divided by the computer into 2 equal subsamples. All comparisons made in processing the data are then duplicated using (a) the first subsample for group 1 and the first subsample for group 2, and (b) the second subsample for group 1 and the second subsample for group 2. The duplication enables the computer to cross check its findings and the investigator to obtain evidence on the reliability of sample proportions.

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[1] This program is written in the MAD language and may be run on the IBM 7090 data processing system, University of Michigan Computing Center.

Subsample size is one-fourth of the combined total for the 2 groups. The combined total must not be greater than 300 nor less than 100. The upper limit is imposed by the capacity of core storage in the computer. The lower limit is intended to keep subsample size at a reasonable level. This is considered important since each subsample will be searched a large number of times for the presence or absence of combinations of characteristics.

The available data pool can include up to 75 factors per individual, each factor being defined at either 2 levels or 3 levels. Each factor is assigned a single card column and level is indicated by a 1, 2, or 3 punch within the column.

In the problematic situation it is assumed that each factor may be found at all levels among individuals in group 1 and in group 2. However, it is not assumed that proportional occurrence is the same for both groups.

Examples of factors at 2 levels are: test items scored as right or wrong; tasks rated as easy or difficult; arithmetic misconception classed as present or absent; questions answered as yes or no; male or female. A value for a continuous variable may be classed as above or below the median.

Examples of factors at 3 levels are: attitudes expressed as agree, undecided, disagree; auditory deficiency classed as pronounced, moderate, absent; rural, urban, suburban; married, widowed, divorced. A value for a continuous variable may be classed as in the upper, middle, or lower (for instance, income level).

The approach to the operation of the program is unusual in that a single computer run provides only partial output data. Three runs through the computer are required to obtain representative samples of all forms of data. The program is organized in this fashion under the assumption that the user would acquire information in one run which could be useful in proposing hypotheses for the next run. Also, the computer search for combinations (especially triples) may be conducted more than once since output will not be identical from one run to another.

Frequency of occurrence and proportional occurrence are reported for each of the 2 groups. Output data for the three runs include:

Run 1: Single factor-level characteristics

Run 2: Pairs of characteristics identified
by the computer
Pairs of characteristics hypothesized
by the researcher (optional)

Run 3: Triples of characteristics identified
by the computer
Triples of characteristics hypothesized
by the researcher (optional)

Study will be required on the part of the user to properly evaluate the variety of combinations identified by the computer. It is likely, for instance, that a number of combinations will have about the same discriminatory power. Better combinations may or may not describe meaningful relationships, or share specific characteristics.

In searching for pairs and triples of factor-level characteristics, the computer program assumes no prior knowledge concerning the relative effectiveness of different combinations. No information is assumed to be accumulated (apart from the best previous combination) as the search continues. The computer simply selects combinations of characteristics at random. Frequency of occurrence in the first subsample for group 1 is initially compared with frequency of occurrence for the first subsample for group 2.

When for a particular combination the computer finds a difference in proportional occurrence greater than or equal to that observed for any previous combination, a second and independent comparison is made using the second subsample for group 1 and the second subsample for group 2. Should the two independent comparisons yield similar results the following output is printed (a) search number at which the combination was located, (b) the particular combination of factor-level characteristics, and (c) frequencies and proportional occurrence for each group in each comparison, and (d) difference in proportional occurrence between the 2 groups in each comparison.

Agreement between the first and second comparison is assumed when (1) the value for P1 obtained in the first comparison does not differ from the value of P1 in the second comparison by more than one standard error, and (2) the value for P2 in the first comparison does not differ from the value for P2 in the second comparison by more than one standard error. The standard error of the difference between proportions is defined as $\sqrt{2PQ/N}$, with $P = Q$ .50 and N = subsample size.

While continuing to search for a combination with still higher discriminating power, the computer will also print as output any combination which satisfies the above criteria and which is in the vicinity of the current maximum. A combination is assumed to be in the vicinity of the maximum when the difference in proportional occurrence between the 2 groups is within one standard error of the difference for the maximum. A printout of such a combination is accomplished by a printout of the search number at which the combination was found.

If the program were to be employed with the maximum number of factors (75) and the maximum number of levels per factor (3), the possible number of pairs = C_2^{75} (3^2) = 24,975. The possible number of triples = C_3^{75} (3^3) = 1,823,175. It would be a formidable task to search all possible combinations for proportional occurrence within the four subsamples.

In an applied problem the number of combinations searched is specified by the program. In searching for pairs the computer will identify and examine a number equal to the possible number (assuming all factors at 3 levels), or 10,000 pairs, whichever is smaller.

In searching for triples the computer will search a number equal to the possible number (assuming all factors at 3 levels), or 25,000 triples, whichever number is smaller. Note: Because the possible number of triples may be very large in comparison with sample size, the program may identify a number of triples which are present in 1 group and not present in the other.

The user may expect that the list of combinations identified by the program would show some changes from one computer run to another. Some combinations may not be searched. Also, chance selection and printout of a better combination will exclude subsequent combinations of lesser discriminatory ability. The lack of uniformity would be more pronounced in the case of a search for triples where the 25,000 combinations examined in a single computer run may be only a small fraction of the possible number.

Finally, it should be noted that this program represents a new approach in the analysis of qualitative data using the computer. Ideas incorporated in the program were suggested by others.[1] Because the program is new and relatively untried, further information is not available on operating characteristics. Information is lacking also on the mathematics underlying the data processing.

DECK ARRANGEMENT

Order	Remarks
a. 2 I.D. cards	Time estimates: 002 for single factor leveled characteristics 004 for pairs of characteristics 008 for triples of characteristics Page estimate: 120 for all runs
b. Binary deck (see Dr. Johnson)	Deck should be preceded and followed by a blue specification card ($ in col 1) as shown: $ EXECUTIVE, BINARY (Binary deck) $ DATA
c. Control card	Indicate whether current search is to be of single characteristics pairs, or triples. Use any columns from 1-72. Form is: RUN = X *

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[1] The use of duplicate samples for cross checking results and provision for the user to propose hypotheses were suggested by William A. Ericson, Assistant Professor of Mathematics, and Research Associate, Computing Center. The desirability of employing high speed computer search in pattern analysis was suggested by Benno G. Fricke, Associate Professor of Psychology, and Assistant Chief, Evaluations and Examinations Division.

When X = 1 the computer will search all single characteristics;
When X = 2 the computer will search all pairs;
When X = 3 the computer will search all triples.

Note: * must not be omitted

d. Control Card(s)

Use 1 or 2 cards as needed (col. 1-72). General form is

F = f; N = n; L(1) = a_1, a_2, a_f *

where the following information must be provided f = total number of factors (maximum = 75)

n = total sample, both groups combined (minimum = 100, maximum = 300)

a_1 = number of levels (2, or 3) for first factor

a_2 = number of levels (2, or 3) for second factor

a_f = number of levels (2, or 3) for fth factor.

Note: * must not be omitted.

e. Format card

Use columns 1-72 as needed. All factors are read in as integers. a skip of k columns is indicated by kX. A skip to a second data card is indicated by /.

Group number (1 or 2) must follow last factor in a data set for an individual.

Examples:

Data: 60 factors in col 1-60.
Group number in col 65.
Format: 6011, 4X, 11

Data: 30 factors in col 11-40.
Group number in col 41.
Format: 10X,3111

Data: 50 factors in col 1-50 on
card 1. 20 factors and
group number in columns
1-21 on card 2.
Format: 50I1/21I1

f. Data cards

For each individual a card(s) must be punched indicating level for each factor and group number to which the individual belongs. Each factor is assigned a single card column and level for a factor is indicated by a 1,2, or 3 punch within the column.

Missing data for an individual may be indicated by a blank column, or 0 punch. However, proportions are computed on the total cases available in each subsample with no adjustment for missing data.

Data cards for all individuals in group 1 should appear first; followed by data cards for all individuals in group 2. Group 1 and 2 must be of the same size and the combined total must not be less than 100 or greater than 300. In addition, the total must be such that 4 equal subsamples can be formed.

Note: The computer will assign all odd numbered individuals in group 1 to the first subsample for that group and all even numbered individuals to the second subsample. The same procedure will be followed for individuals in group 2. Since the subdivision of groups 1 and 2 will be done systematically, it is recommended that data cards for the 2 groups be mixed.

It may be noted that a total sample of 200 individuals (groups 1 and 2 combined) will produce 4 subsamples of 50 individuals each, a reasonable subsample size. This program will not operate with subsamples of fewer than 25 individuals.

g. Hypothesis card(s) (optional)

The user cannot be sure that the computer will examine every pair or triple of characteristics. However, the user can specify particular combinations to be searched. (Hypothesis cards should not be used when single characteristics only are examined).

One card should be used to identify each hypothesized combination of factor-level characteristics. The card(s) should be arranged consecutively following data cards. The form for each card used to hypothesize pairs (run = 2) is

$$H = F_1, F_2, L_1, L_2 *$$

where F_1 = first factor in pair (identified by number)

F_2 = second and different factor

L_1 = level for first factor

L_2 = level for second factor.

Example: H = 26, 31, 2, 1 *

The form for each card used to hypothesize triples (run = 3) is

$$H = F_1,F_2,F_3, L_1, L_2, L_3 *$$

where F_1 = first factor in triple (identified by number)
F_2 = second and different factor in triple

F_3 = third and different factor in triple

L_1 = level for first factor

L_2 = level for second factor

L_3 = level for third factor

Example: H = 12, 27, 29, 1, 1, 3 *

Note: there is no restriction on number of hypothesis cards. Specification for each combination must include *.

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